BULLETIN
OF THE
MEDICAL LIBRARY ASSOCIATION

VOLUME 41
Quarterly
January-October 1953

Part II of the BULLETIN OF THE MEDICAL LIBRARY ASSN.
vol. 42, no. 1, January, 1954
Part II of Two Parts

Medical Library
610.5
M5
L71b
v. 41-42

PUBLISHED JANUARY, APRIL, JULY, AND OCTOBER 1953
COPYRIGHT BY THE ASSOCIATION, 1954

COMPOSED AND PRINTED AT WAVERLY PRESS
BALTIMORE, MARYLAND, U.S.A.

DW

Medical
Direct

Contents for Volume 41

No. 1, January 1953

Smith, Austin, M.D.—Common Publishing Problems 1
Campbell, James A., M.D.—The Library's Impact on Medical Education 7
Committee on Criteria for Medical School Libraries—Report 12
Fry, Alderson—Plan and Equipment of the Health Sciences Library, University of Washington, Seattle 24
Larkey, Sanford V., M.D.—The Welch Medical Library Indexing Project 32
Taine, Seymour I.—The Subject Heading Authority List of the *Current List of Medical Literature* 41
Kovacs, Helen—Foreign Dental Periodicals 44
Kargus, Audrey L.—Delivery Service by the Library 51
Draper, Wesley—Publicity for the Medical Society Library 53
Shanley, J. P.—Tips to Interviewers 58
Labor Saving Devices and Techniques of the Future; Symposium
I. Introduction, By Mollie Sittner 60
II. Notched Cards, By Louise Darling 63
III. Book Storage, By Suzanne C. Fallot 66
IV. Summary, By Mrs. R. Jobe 68
Baer, Karl A.—Leonardo da Vinci (1452–1519) 69
Johansen, Dorothy O.—Man; the Common Interest of History and Medicine 71
Editorials 78
Association News 81
News Items 83
Book Reviews and Journal Notes 89
Obituaries 100

No. 2, April 1953

Gottlieb, Murray—This Business of Rare Books 103
Doss, Mildred A.—*The Index-Catalogue of Medical and Veterinary Zoology* 110
Mayer, Mrs. Sarah G.—Place of Subject Cataloging in Bibliographic Organization 114
Meyerhoff, Erich—A Bibliographical Manual for Users of a Medical Library 118
Recent Books of Special Interest to the General Practitioner 122

FRIENDS OF THE ARMED FORCES MEDICAL LIBRARY
VIETS, HENRY R., M.D.—Letting Substance into the Texture 125
MINUTES 130
CONSTITUTION and By-Laws 130
KENNEDY, CATHERINE—Medical Translation Service and Index 132
PALMER, MARGARET GAYLEY—Oral Medicine Film Library 138
McKENNA, MURIEL R.—The Veterans Administration and Interlibrary Loans 140
SCHNECK, JEROME M., M.D.—A Medical Hypnotherapeutic Addendum to the Case of M. Valdemar 144
KOCH, SUMNER L., M.D.—Medical Book Reviewing from the Specialist's Standpoint 148
Notes from London 151
Short Communications to the Editor 154
Editorials 156
Association News 158
News Items 163
Book Reviews and Journal Notes 169

NO. 3, JULY 1953

HOWARD-JONES, N.—International Medical Documentation and The World Health Organization 191
Selected Periodicals on Psychoanalysis and Related Medical Fields for the General Medical Library 198
CHAREN, SOL—The Rorschach Test 208
COOPER, ELIZABETH W.—The Use of Visual Media for Better Public Relations in a Medical Library 215
Symposium on Three Types of Medical Libraries
I. A University Medical Library, by I. B. Jones 220
II. Medical Society Libraries, by W. A. Lee 224
III. A Combined University-Medical and Medical Society Library, by G. Wilson 230
HECK, LILAH B.—New Library at the University of Oklahoma School of Medicine 238
Subject Headings
I. DENUES, A. R. T.—Examples from a Personal File in Cancer Research 244
II. MORSE, KENNETH T.—The Organization of a Bibliography in Electron Microscopy 246
GLASGOW, MARCELLA—The Budget in the Medical School Library 252
MORGAN, MELVIN—The Literature of Radiobiology and Atomic Medicine 258

BRODMAN, ESTELLE—Medieval Epidemics 265
DAVIS, LORA-FRANCES—Instructions for a Medical School Library Planning Survey 273
DISBROW, MARY E.—Impressions of the Course in Medical Libraries at Emory University 277
Notes from London 283
President's Page 287
Editorials 290
Association News 293
News Items 295
Book Reviews and Journal Notes 303

No. 4, OCTOBER 1953

LUNDY, FRANK—The Medical College Library 319
Symposium on Use of Main Classification Schemes
Summary, by Ned Eig 333
Army Medical Library Classification (preliminary edition), by Mrs. Elizabeth D. Marsh 334
Army Medical Library Classification (1st edition), by Mrs. Ella M. Crandall 340
Boston Medical Library Classification, by Catherine Kennedy 343
Dewey Decimal Classification, by Helen A. Wolter 349
Library of Congress Classification, by Bertha B. Hallam and Ora K. Goodman 353
Cunningham Classification, by Mrs. Sarah C. Brown 357
DUFFIELD, PAULINE—Discarding Sets of Medical Books 361
MECKEL, CLARA LOUISE—Bigger or Better Collections? 365
LEAKE, CHAUNCEY D., PH.D.—The Role of the Medical School Library in the Medical School Teaching Program 369
DENTON, GEORGE B., PH.D.—Dental Journals for a Dental School Library 379
ROBINSON, MRS. ARLINE—Stimulation of the Use of the Dental Library 384
DRAGONETTE, MRS. DOROTHY B.—A Comparison of the *Army Medical Library Classification* and the *Black Classification* for Use in a Dental Library 388
ELDREDGE, ALBA—The Dental Library in the Organization of a New Medical Center Library 393
CLARK, MRS. GERTRUDE M.—Some Secondary Tools in Reference Work 396
STRIEBY, MRS. IRENE M.—The Pharmaceutical Library of the Future 399
OSBORNE, GEORGE E., PH.D.—Faculty and Student Use of the Library 405
DUNTEN, BERNICE L.—How to Make the Library Function: Teaching the Use of the Library 410

ANDERSON, ISABELLE T. AND OSBORNE, GEORGE E., PH.D.—The History of the Committee on Libraries of the American Association of Colleges of Pharmacy 414
Notes from London 419
Editorials 422
Association News 425
News Items 433
Book Reviews and Journal Notes 441

WZ
MS
L716
UNIVERSITY
OF MICHIGAN
JAN 4 1953
dup
41-42
Complete
Springfield

BULLETIN
OF THE
MEDICAL LIBRARY ASSOCIATION

VOLUME 41 NUMBER 1

January 1953

EDITORIAL POLICIES FOR THE GUIDANCE OF AUTHORS

1. *Kinds of articles accepted.* Contributions of value to medical bibliography, medical librarianship, to the history of medical books, libraries and librarians, and to the history of medicine are solicited. No paper which has already appeared elsewhere will be accepted, nor will simultaneous publication elsewhere be permitted.

2. The editors reserve the right to return a manuscript to the author for revision if it is not in standard form, or to make minor editorial changes in the manuscript, if this can be done without changing the style of the article.

3. *Manuscripts* should not exceed twenty-five typewritten pages. They should be double spaced on one side of the paper and illustrations should be on separate sheets. The original copy and two carbon copies (only one copy of the illustrations needed) should be sent to the Editor. The author should retain one copy. The official title and address of the author should be included at the head of the manuscript.

4. *Illustrations* should be numbered and marked with the author's name. Legends should be typed on separate sheets and be placed with the illustrations. The text should contain notations of the approximate position of the illustrations. The number of tables and illustrations should be kept at a minimum. An excessive number of these may result in the rejection of the manuscript, or the author may be billed for the cost of printing them.

5. *References.* All citations should be in the style of either the *Index-Catalogus* or the *Quarterly Cumulative Index Medicus*. Abbreviations of journal titles should be identical with those of the latter index.

6. *Footnotes.* Footnotes should appear on the same page of the manuscript in which reference is made to them. They should be numbered consecutively from the beginning to the end of the manuscript.

7. In contributions dealing chiefly with bibliography, the citations will be printed in the main text. Each annotation to citations in such bibliographies should be typed in a separate paragraph.

8. *Galley proofs* will be submitted to authors for the correction of printers' errors. Changes in the text at this stage will be billed to the author. Promptness in the return of galleys is essential.

9. *Reprints* may be purchased at cost. For prices, address correspondence to the Waverly Press.

The BULLETIN is published four times a year, in January, April, July, and October by the Medical Library Association. Subscription price a year: Domestic, $7.00; Foreign, $7.50. Single numbers are $1.75 each.

"Entered as second class matter November 21, 1949 at the Post Office at Baltimore, Maryland, under the Act of March 3, 1879."

Office of Publication—Mt. Royal and Guilford Aves., Baltimore 2, Md.

Communications for the editor, manuscripts, and books for review may also be addressed to Estelle Brodman, Editor, *Bulletin of the Medical Library Association*, or to Miss Anna E. Dougherty, Associate Editor, both at the Armed Forces Medical Library, Washington 25, D. C.

Business correspondence regarding subscriptions may also be addressed to Miss Helen Woelfel, Treasurer, Medical Library Association, 1802 Third Street, Louisville 8, Kentucky. Checks for subscriptions should be sent to the Treasurer.

Requests for back numbers may also be addressed to the Librarian, Medical and Chirurgical Faculty of the State of Maryland, Baltimore 1, Md.

PRINTED BY WAVERLY PRESS, INC., BALTIMORE 2, MD.

JANUARY 1953
Volume 41 Number 1

BULLETIN *of the* MEDICAL LIBRARY ASSOCIATION

CONTENTS

SMITH, AUSTIN, M.D.—Common Publishing Problems 1
CAMPBELL, JAMES A., M.D.—The Library's Impact on Medical Education. 7
Committee on Criteria for Medical School Libraries—Report 12
FRY, ALDERSON—Plan and Equipment of the Health Sciences Library, University of Washington, Seattle 24
LARKEY, SANFORD V., M.D.—The Welch Medical Library Indexing Project 32
TAINE, SEYMOUR I.—The Subject Heading Authority List of the *Current List of Medical Literature* 41
KOVACS, HELEN—Foreign Dental Periodicals 44
KARGUS, AUDREY L.—Delivery Service by the Library 51
DRAPER, WESLEY—Publicity for the Medical Society Library 53
SHANLEY, J. P.—Tips to Interviewers 58
Labor Saving Devices and Techniques of the Future; Symposium
I. Introduction, By Mollie Sittner 60
II. Notched Cards, By Louise Darling 63
III. Book Storage, By Suzanne C. Fallot 66
IV. Summary, By Mrs. R. Jobe 68
BAER, KARL A.—Leonardo da Vinci (1452–1519) 69
JOHANSEN, DOROTHY O.—Man; the Common Interest of History and Medicine 71
Editorials 78
Association News 81
News Items 83
Book Reviews and Journal Notes 89
Obituaries 100

Copyright, Medical Library Association, 1953

EDITORIAL BOARD

MISS ESTELLE BRODMAN
Armed Forces Medical Library
Washington 25, D.C.
Editor

MISS GERTRUDE L. ANNAN
New York Academy of Medicine
New York 29, New York
Chairman, Publications Committee

MISS ANNA E. DOUGHERTY
Armed Forces Medical Library
Washington 25, D.C.
Associate Editor

MR. ALLAN SALANT
Health Center Library
Ohio State University
Columbus, Ohio
Business Manager

MR. CHARLES C. COLBY, III
Boston Medical Library
Boston 15, Massachusetts
Assistant Business Manager

EXECUTIVE OFFICERS

President.....Mr. William D. Postell
Louisiana State University
School of Medicine Library
1542 Tulane Avenue
New Orleans 12, La.

Vice-President.....Miss Marion Dondale
Albany Medical College
Library
Albany 1, N. Y.

Honorary Vice-President.....Dr. Emerson Crosby Kelly
269 South Maine Avenue
Albany 3, N. Y.

Secretary.....Miss Louise Lage
Lilly Research Laboratories Library
740 S. Alabama Street
Indianapolis 6, Indiana

Treasurer.....Miss Helen Woelfel
Army Medical Reseach Laboratory
Library
Building T-1020
Fort Knox, Kentucky

Immediate Past-President.....Miss L. Margueriete Prime
American College of Surgeons Library
40 E. Erie Street
Chicago 11, Illinois

BOARD OF DIRECTORS

The foregoing officers and the following elected members:

Mr. Thomas E. Keys (1 year)
Miss Edith R. Gordon (1 year)
Mr. Wesley Draper (2 years)
Miss Helen G. Field (2 years)
Mr. Scott Adams (3 years)

MEMBERSHIP COMMITTEE CHAIRMAN

Miss Esther Judkins
Rockefeller Institute for Medical
Research Library
66th Street & York Ave., New York 21,
N. Y.

PUBLIC RELATIONS OFFICER

Miss L. Margueriete Prime
American College of Surgeons Library
40 E. Erie Street, Chicago 11, Ill.

ARCHIVES CURATOR

Librarian
Medical and Chirurgical Faculty of the
State of Maryland Library
1211 Cathedral Street, Baltimore 1, Md.

PLACEMENT ADVISOR

Mrs. Breed Robinson
University of Maryland Medical,
Dental & Pharmacy Libraries
Baltimore 1, Md.

REGIONAL GROUP LIAISON OFFICER

Mrs. Lillian B. Dumke
Charles Denison Memorial Library
University of Colorado
Medical Center
4200 E. Ninth Ave.
Denver 7, Colorado

EXCHANGE MANAGER

Miss Mildred V. Naylor
Martinsville, N. J.

Common Publishing Problems*

By Austin Smith, M.D.

Editor, Journal of the American Medical Assn.
Chicago, Ill.

THE purpose of a journal should be of common interest to author, editor, publisher, and reader, and yet there are many who do not truly understand why a journal was created and how it now functions. This is particularly true of authors who submit papers with little thought of the reader audience. Unfortunately, it is also true of many users of a journal. Perhaps this talk can help explain away some *criticisms* which might otherwise not be forthcoming so readily.

Some periodicals are solely scientific, others organizational, still others a mixture. Some provide only technical research data; others are for practical application. Usually the nature of a journal is determined by the owner, sponsor, or publisher and reflects to a large extent such relationship. For example, *The Journal of the American Medical Association* must present scientific material and items of organizational interest. Although a scientific journal, it is also the official journal of the American Medical Association and carries many statements pertaining to the work of the Association. Also, it places emphasis on practical material for clinical application rather than on topics essentially of interest to researchers only, although it does contain some of the latter, since its readers are specialists as well as general practitioners, and both groups ask some satisfaction to meet their needs and demands. The words "meet their needs and demands" should be underscored, because all official journals should reflect the needs and demands of the sponsoring organizations and readers. This involves a double responsibility.

Each journal must consist of departments particularly suited to that journal. Thus, *JAMA*, as it is popularly known in this country and in practically all foreign countries, contains original articles, editorials, special reports, news items, abstracts, advertising, answers to questions, and even reports from foreign correspondents. The latter department stems from the interest of physicians in this country in medical events abroad and of physicians abroad in their neighbors' work. There are thousands of foreign subscribers to *The Journal of the American Medical Association*, and an opportunity to serve so many physicians from so many countries with so many diverse interests offers

* Digest of remarks at the 51st Annual Meeting of the Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

a fascinating challenge for author, editor, and publisher. In my opinion it also offers a challenge for those who work so closely with the readers, namely, librarians. Perhaps this is why I believe that the problems mentioned in this discussion are common to all of us; they certainly affect in some way the activities of all of us.

Paramount among the policies of mutual concern are those pertaining to the selection of manuscripts, the writing of editorials, the publication of selected answers to questions, the opinions expressed in book reviews and letters to the editor, and the facts presented in foreign letters. Other departments involve matters of much interest, but they too are obvious. However, all of the policies are based on the expressed wishes of the readers, the needs of the reader as determined by several factors, and the needs of the organization publishing the journals. To aid the editor and publisher in determining such influencing factors, surveys may be helpful. Properly conducted, they are worthwhile and provide much helpful guidance. Improperly prepared, conducted, or interpreted, they are worthless, sometimes even harmful. So far as *The Journal of the American Medical Association* and the nine special journals of the Association are concerned, they have been very helpful and well worth the time and money spent on them.

Another aspect of publishing sometimes overlooked by all except publisher and editor concerns costs. The costs of labor, paper, and ink have forced many journals to raise prices, others to raise advertising rates, others to change their format, and still others to combine or cease publication. This facet of printing at times raises problems of almost unbelievable proportions. *The Journal of the American Medical Association* because of its circulation and advertising income can meet its own expenses and helps offset the losses incurred in the publication of the Association's nine special journals and the *Quarterly Cumulative Index Medicus*. These periodicals are provided as a service to those with special clinical and research interests and entail a yearly loss in the publishing balance sheets of more than $100,000.00. Or, in other words, this is an additional $100,000.00 which the American Medical Association contributes to research, this in addition to the grants given directly to researchers and the money spent on the underwriting of the various scientific councils and committees.

Among the problems which face some publishers and editors are the following items.

Obtaining Suitable Material

This problem does not significantly affect *The Journal* since far more contributions are received than can be published in a journal the size of which is controlled in general by the Board of Trustees. The mass of editorial material which comes to *The Journal* office is carefully reviewed and weeded out, and

still there is much of value that has to be returned to the authors with the suggestion that it be published in a special journal, or elsewhere because of lack of space in *The Journal*. This problem of obtaining suitable material is, however, a serious one with some medical journals, which are in this respect less fortunate than *The Journal*. The editors of these less fortunate journals probably have to request selected authors to write papers for their periodicals, and in some cases they probably have to pay these authors for this work. Again *The Journal* is fortunate in that, except in rare instances where special articles are requested, it does not have to pay the authors of articles.

A custom of *The Journal* is to have no blank spots on its pages, as so many journals do. For example, it is not unusual to see almost an entire page in some journals left blank because the preceding article broke near the top of the page and the next article was started on the top of the next page, leaving a large preceding blank page. *The Journal* always fills these blanks with "fillers" which are important statements from signed articles in other journals, excerpts which stand by themselves. These "fillers" are carefully sought out and selected and aid the editor and his staff in keeping to a minimum blank space, which is very expensive in a periodical with a large circulation.

Editing

There is always difficulty in obtaining competent manuscript editors. A number of years of experience are required to develop an expert manuscript editor, even though the basic knowledge is on the level of a college degree. Even then they vary greatly in capacity and efficiency, and the experts in this field are, in a way, in a class by themselves.

Meeting Deadlines

In a weekly medical publication the size of *The Journal*, the meeting of deadlines is of absolute necessity and a very exacting problem. Plans to do so sometimes must be made months or weeks in advance of the date of publication, and the cooperation of many individuals and departments is required. Such cooperation is practically always forthcoming, and on infrequent occasions when unexpected difficulties arise, they can be overcome by patience and consideration of others or occasionally by changes in long-made plans. Should a department or individual fail to supply the material in time, it probably will lead to overtime on the part of other employees, such as editors, manuscript editors, printers, stereotypers, and press men—which overtime today is limited by some unions and is paid for by time and a half or double time.

The Printing Department

It is a great convenience to have the printing department and press room in the same building with the editorial department, as is the situation for *The*

Journal. This arrangement permits last minute important changes to be made before going to press and thus keeps the periodical more up-to-date and more accurate. It is also a great advantage to have the same printer work on a publication continually, rather than to change from week to month to year. Thus the printer learns what the editor wants in the way of layout and style, and often can be very helpful in this respect.

Paper

For several years the paper supply has been tight, and during the last war the size of *The Journal* was restricted in order to stay within the limits of paper prescribed by the Government. The paper problem at present is not so restrictive, and the A.M.A. usually has on hand a little more than a million pounds of paper for current and reserve use. *The Journal* uses a better grade of paper for illustrations with fine detail, and very frequently has carried a 16-page form to handle such illustrations. This paper is run on a flat bed press which is fed by hand and requires more time than the rotary press, necessitating planning so the flat form can be in the printer's hands in plenty of time. While paper, like everything else, has advanced in price, it is highly desirable in a periodical to use a type of paper which makes reading easy and will stand up for many years on library shelves or on those of a physician's office. Many other problems go into the publication of a good medical periodical, such as good ink, good presses, good linotypes, and good proofreaders. Some idea of how practical the paper problem is can be gained from the fact that the Association uses about 460 tons of paper per month for its publications.

Editors

The editor is responsible for the selection of material in a periodical, and of necessity he must have assistants in various lines of work. The prime requisites of editorial assistants are devotion to duty, love for the work, sound educational background, industriousness, and accuracy. These assets are especially helpful at times when the complaints pour in against the editor for some choice he made which does not please all readers!

Sometimes letters of complaint are received by editors and publishers which clearly reveal that the senders do not know for whom the journals are intended. So far as *The Journal of the American Medical Association* and the nine special journals are concerned, they are prepared primarily for members of the medical profession. It is always gratifying when others use these periodicals, but a careful reading of the by-laws of the Association and of the minutes of the Board of Trustees leaves no doubt about the purpose for which these journals were created—a fact that cannot be ignored by the officers of the Association or the editorial staff. Sometimes this sense of responsibility may cause unforseeable problems, for example, when an urgent warning about some drug must

be sent hurriedly to the profession and when some readers demand the policies for the journals be changed to meet their personal wishes.

This leads directly to the question, "Who runs a medical journal?" The sponsoring organization? The readers? The advertisers? Much depends, of course, on the nature of a journal, who owns it, and for what it is intended, e.g., for service or for money. So far as *JAMA* and the special journals are concerned, they are not "run" by any one man or one group. They are the property of the American Medical Association, the policies of which are determined by a House of Delegates of about 200 members, which meets twice a year. In the interim the Board of Trustees carries on and meets several times yearly. All officers and employees are expected to meet the spirit of the policies set by the House of Delegates, but are expected also, of course, to spell out the details of operation for their work. In so doing they must always consider what the majority—and minority—members of the Association want, and many times they must anticipate needs and exert leadership. As for the journals, there are readers other than members to consider in addition. Advertisers have no influence on policies. Thus, it can be seen that not one person but many "run" the journals, which is as it should be for "official" publications.

There are two or three special points that might be raised. All advertisements appearing in the periodicals of the American Medical Association are screened by the scientific councils and committees or by the Advertising Committee. All must conform to certain standards laid down by these councils. Such scrutiny is necessary to maintain high advertising standards, but, needless to say, poses perplexing problems at times for many people. In addition to screening advertisements for drugs, foods, devices, and other items, the Committee must watch carefully for classified advertisements in which mention is made of religion or race in a way that might suggest prejudice. This is an annoying problem at times, because most advertisers are not biased in their views but do want to supply or obtain useful information, some of which at times is required by law.

Another item of interest to many is the style employed for A.M.A. publications. A few have asserted that use of a certain style destroys the author's forcefulness of expression. This should not be so, as manuscript editors only correct grammar, try to improve expression of thought to obtain clarity, and mark pages for the printers. Obviously, if an author persists in the use of slang, his "style" will be changed, but this is not the case for the author who writes forthrightly and clearly. This problem recalls an often raised question: "On what basis is an article accepted?" The answer is simple: an article is accepted if it sets forth something of value to the reader audience. All editors are forever looking for new ideas and excellent timely reviews, and when a manuscript arrives that offers a new idea or is an excellent review of a timely subject, it is more than welcome. In the United States it is not customary to pay authors

for their research papers, although a few journals do offer payment. In Europe, however, authors are commonly paid, which does not always encourage brevity.

Finally, I should like to mention the need for understanding one another's problems. Sometimes an editor makes decisions, the reasons for which are not always apparent to others. It is true for publishers, and I know it must be true also for medical librarians. Perhaps if each group understood the other's problems, there would be less questioning when some action is taken. In this respect I should like to remind the members of this audience that they can always believe that the American Medical Association and its headquarters offices are always willing, yes, even anxious, to be helpful to all groups whenever possible. Mistakes sometimes are made, but all of us are willing to correct mistakes when we can. Sometimes, however, they are not truly mistakes but are necessary actions. The true status of such a situation can always be ascertained by asking questions. Being one who never hesitates to ask questions, I would like to urge others to do the same when the occasion arises. In this way we may have fewer common publishing problems.

Reprinted from BULLETIN OF THE MEDICAL LIBRARY ASSOCIATION
Vol. 41, No. 1, January, 1953
Printed in U.S.A.

The Library's Impact on Medical Education*

BY JAMES A. CAMPBELL, M.D.

Dean, Albany Medical College
Albany, N. Y.

ANYONE who faces an audience of this nature and speaks about medical education and medical libraries is somewhat foolish, I believe, especially bringing with him as little experience as I have at this date. In speaking of medical education and what the impact of current economic, social, and educational factors may have on trends in medical education, one must consider an historic approach to medical education. That focuses, of course, almost directly upon libraries as the heart of any educational institution, and on librarians and those other people who have held most dear the volumes of history and the facts of history, which are handed down to us who are trying to begin a job at this particular time.

I suspect that Dr. Francis would agree wholeheartedly that modern medical education in the United States began at about the turn of the century with Dr. Osler's migration from Montreal. The next significant step was the lauding of that move by Dr. Abraham Flexner in his well-known and classic report published in 1910, under the auspices of the Carnegie Foundation. At that time it was pointed out that we could no longer adequately educate doctors in the trade schools or in the diploma mills in existence in America in those days. It became a more scholarly discipline; it became a scientific discipline and a professional experience. Progress continues to be made in joining these in their proper proportions and with the proper solidity necessary for development of educated as well as trained physicians.

It is not correct to think even for a moment that medical schools alone are responsible for medical education these days. The whole problem of medical education has become expanded at both ends of the medical college spectrum. Medical school *per se*, as you well know, covers a period of four years, but before one may enter medical school, he must have at least three years of premedical or collegiate experience, and subsequent to his receipt of the M.D. degree, he begins a period of hospital training which is at a minimum of one year of internship. The American Academy of General Practice now suggests three years of hospital education and experience, and if one becomes so superspecialized as, for example, a neuro-surgeon, he must spend an additional seven

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

or eight years beyond receipt of his M.D. degree. These years are spent in hospitals which may not be under the direct aegis of a medical college.

Now, libraries and their use are integral parts of any educational experience. Therefore, adequate libraries must be found in the ever-changing areas of medical education. We can no longer limit our medical libraries to medical schools, or even to large hospitals. Libraries of increasing complexity and breadth must be made available everywhere doctors are trained. This is a real problem because many of our young men receive training not only in university hospitals in the large urban communities, but as the medical schools recognize their increasing responsibility for their impact on medical care throughout the country, arrangements must be made for some of these interns and residents in training to go to smaller hospitals for a portion of their experience. This means that adequate library facilities follow along with them. Once these doctors-in-training go to an area we find that the attending physicians become more interested in continued education and, therefore, call more and more frequently upon facilities of a revolving library loan system or some such other arrangement. It becomes educational to the communities to receive these boys for training, as well as educational to the young physicians who get their training in the peripheral areas.

We have all heard about the difficulties in getting boys not only to be general practitioners but also to go to rural communities. We know that one of the main reasons that they do not like to go to rural communities is that they become so isolated in a professional sense. I wish I had the answers to these problems. Maybe you will be the people to give us the answers in some of these situations; I know that it would be with great reluctance that I would leave the contacts of a good medical library, which I feel is an essential to good medical practice.

I want to read, just to bring in a light touch, if I may, a letter which I received the other day from South America to show you that the United States isn't the only place having difficulty in persuading physicians to locate in the rural areas. This is from Bogota, Colombia. "Dear Sir: I am writing this letter to ask for some information on certain points. To be licensed in Colombia, every young doctor must have a year of rural practice or six months with the Armed Forces fighting the guerillas. I am planning to spend the months fighting the guerillas." We have not yet reached the stage of making it compulsory to go either to "East Farmville" or to join the fighting forces in, say, South Korea, but we do have to find some solution for making it possible for the professional contacts of rural physicians to be maintained with their colleagues, with their previous medical experience, and with continued medical education. I believe that some form of rotational library opportunities will serve to satisfy this need and to assist thereby in supplying medical personnel to rural areas. I hope that some of you people will work in solving this problem.

In scanning some of my books the other night, I came across a volume *Currents and Countercurrents in Medical Sciences* which I would like to call to your attention for a very pleasant evening's reading. It was written by Dr. Oliver Wendell Holmes and delivered as an address to the Massachusetts Medical Society in Boston in 1861. He said that one of the troubles with medicine of that day was it found itself under considerable pressure. "The practitioner finds himself very, very busy and he dearly loves to think of himself as a practical man. A medical man, as he goes about his daily business after twenty years of practice, is apt to suppose that he treats his patients according to the teachings of his experience. No doubt that is true to some extent, to what extent depending on the qualities of the individual; but it is easy to prove that the prescriptions of even wise physicians are very commonly founded on something quite different from experience. There is no reason to suppose that the present time is essentially different in this respect from any other. Much, therefore, which is very commonly considered to be the result of experience will be recognized by the next, or in some succeeding generation, as no result at all but as a foregone conclusion based on some belief of the time."

A physician who has been graduated in any particular year from medical school becomes licensed very shortly thereafter and is licensed forevermore to practice medicine. Somehow we must make it possible for him easily to keep up with the changes going on about him, so that he doesn't find himself subject to the criticisms levelled in 1861 by Oliver Wendell Holmes. He goes on to write in his statement that it is frequently necessary to look up to the stars to find out in what direction we are going. He points out that Sir Edward Parry in his trek for the Pole was progressing northward at the rate of ten miles a day, gaining despite overwhelming odds against ice, cold, and starvation. One of his party looked up at the stars and then saw they were on an ice floe drifting towards the Equator twelves miles each day; despite their efforts they were losing ground at the rate of two miles daily. This somehow happens to many physicians in the press of circumstances, and I am pleading with you to help these physicians, even though they do not ask for your help or even tell you they don't need your help. We, as doctors, are always asked to view the patient as an individual and a human being. I am asking you who are so important to the medical team that you look at us as human beings, too. We are loathe to admit fallibility. We are loathe to give up these almost godlike qualities ascribed to us by our cured patients, and we need your kindness, your guidance, and your leadership in some of these areas. I hope that we will consider seriously your suggestions when you make them to us: I say that in all sincerity and wish you well. It will be a hard struggle for you to get complete agreement from many of us, but keep trying. We really need you, and we need you badly.

Speaking of treating the patient, I again want to refer to Holmes' speech

because he said: "Lastly, medication without insuring favorable hygienic conditions, is like amputation without ligatures. I had occasion to learn this well of old when physician to the Broad Street District of the Boston Dispensary. There, there was no help for the utter want of sanitary conditions, and if anybody got well under my care it must have been by virtue of the rough and tumble constitution which emerges from the struggle of life in the street gutters, rather than by the aid of my prescriptions. But if the materia medica were lost overboard into the bottom of the sea, it would be all the better for mankind and all the worse for the fishes." Despite the fact we are educating our boys in the realm of the miracle drugs, and indeed they are miracle drugs, and of the "mycins" and other anti-biotics, we still cannot alter the circumstances in which the patients find themselves once their specific diseases are cured by specific drugs.

The latest statistics, as you well know from reading the daily papers and the other modern sources of medical information, such as the *Reader's Digest* and *Time*, have indicated that there is an extension of life span of almost twenty years. That is a true statement, but it is extended from the moment of birth. What is not mentioned frequently enough is that a person who has reached the age of fifty today has no really greater life expectancy than he did if he reached the age of fifty, thirty years ago. Our area for investigation is two-fold in this area of fifty or over. First of all, how can we increase that part of our life span; and, secondly, and this is a problem in medical education, how can we train physicians to be more competent to care for the increasing population in this age group? At present, that is the source of much complex study being carried on in many institutions, and the direction of many funds being spent for medical, social, and economic research. We are trying to adapt our medical curriculum to meet the needs of this changing world as best we can, but I don't know how we can keep the curriculum or the libraries up with all of these changes. I don't know how it is mechanically possible to do so, but we have to make some sort of effort. I am sure that the *Biology of the Pneumococcus*, two handsome volumes in our libraries, is gathering dust because the students these days don't get them out; but how many libraries can boast of having an adequate shelf of texts, volumes, and journals on geriatrics, on the problems of aging, on the problems of degenerative diseases. I don't mean to make anyone fifty or up aged because I would remind you that the biologists say that we begin to die at the age of twenty-one, and if there is anyone under twenty-one here, I am willing even to stretch that point.

We don't know how to meet all of these situations, because, again, in the medical school we have only four years to do it. You in the libraries and in hospitals are going to be most important in getting bibliographies, new ideas, new communications into the hands of these people who continue to need further training. I think that so much of the continued education of our physicians

is being maintained by the drug houses that it is a sad commentary on some of our more formal sources of information. The detail man who goes out from the drug houses is not adequate by a long way, but I think that all of us in medical school and hospital libraries might take a page out of his book in giving some of these bits of information and current developments in a more attractive form and a more palatable form to keep the busy physician abreast of the changing times.

There is one final thing I should like to ask you to do as librarians, and I think that anyone who spoke to this group would be unwise if he didn't quote Dr. Osler as well as Dr. Holmes. Dr. Osler addressed the group at the dedication of the Boston Medical Library in 1901, and he said, "I should like to see in each library a select company of the immortals set apart for special admiration. Each country might have its representatives in a sort of alcove of fame, not necessarily books but, more often, the epic-making contributions to be found in ephemeral journals." Then he said this, and in 1901: "It is too early, perhaps, to make a selection of American medical classics."

I would like to suggest that in each of your individual libraries which may be visited by the young as well as the older physicians or the coming generation of physicians you reconsider this statement of 1901, and see if we are not ready in this country to make a little alcove of our own. I would like to suggest that you start filling this Hall of Fame of American Men of Medicine, selecting a living physician and getting out his works. I am referring to Dr. James Herrick, who is about ninety-six or so, I guess, who has accomplished what few men have been able to do—describe not one but two major diseases: sickle-cell anemia, and that well-known and all too familiar killer, coronary occlusion. I should like to suggest that you add to this shelf something of Dr. Oliver Wendell Holmes, who described puerperal sepsis, the killer of mothers; I should suggest that you add Abraham Flexner's report, which completely revolutionized American medical education; I should like to suggest that you add to that shelf the Nobel prize-winning material of Dr. George R. Minot, and very shortly thereafter, the material of Dr. Selman Waksman on streptomycin. My former chief, Dr. Alfred Blalock, who made possible new lives for blue babies, stands high in the ranks of this group of medical men; and last, but by no means least, I should suggest that the monumental work of Dr. Trudeau in tuberculosis be recognized.

To recapitulate: the geographic areas of medical education are changing; the types and distribution of medical care are changing; the problems in aging and the degenerative diseases are causing a changing program in medical research and in chronic medical care; and, finally, the world in which our patients live is changing and we must try to keep ourselves adaptable without becoming vacillating in our main purpose.

Report of Committee on Criteria for Medical School Libraries

SURVEY OF THE LIBRARIES IN THE MEDICAL SCHOOLS OF THE UNITED STATES AND CANADA

PRELIMINARY TABULATION OF REPLIES

June 7, 1952

I. LIBRARY STAFF

A. Administration

1. The administration of the medical college
   (a) Subordinate to the Librarian of the University
   (b) Under the dean of the medical school
   (c) Under a faculty committee of the medical school
   (d) Librarian responsible

Replies:				
cd 12	c 7	acd 3		
bcd 10	b 5	abc 3		
ac 8	ad 4	ab 2		
bd 8	bc 4	abd 2		
a 7	abcd 4	d 1	Total 80	

B. Number on library staff

1. Full time—with library or academic degrees 233
2. Part time—with library or academic degrees 28
   Number of above who applied for certification 46
3. Do you rely for some professional services on a general library or branch?

yes	*no*	*no reply*
27	47	6

C. Does the chief librarian have instructional staff rating?

yes	*no*	*no reply*
35	44	1

D. How much vacation do professional library staff members have?

1 month or equivalent	*2 weeks*	*3 weeks*	*2½ weeks*	*6 weeks*
67	9	2	1	1

E. What retirement age has been set?

No plan	10	65–70 yrs.	3
No reply	4	60–70 yrs.	2
65 yrs.	41	65–68 yrs.	1
70 yrs.	9	55–65 yrs.	1
68 yrs.	4	67 yrs.	1
60 yrs.	3	After 30 yrs. service	1

F. Do staff members have tenure?

yes	*no*	*no reply*
33	41	6

G. 1. Is time allowed for attendance at M.L.A. meetings?

yes	*no*	*no reply*	*only if participating*	*regional only*
76	1	1	1	1

2. Are expenses paid for attendance at M.L.A.?

yes	*no*	*partly*	*if participating*
43	14	20	3

H. Has a procedure or work manual been compiled?

yes	*no*	*in process*	*no reply*
41	32	6	1

(2 do not use)

II. LIBRARY'S CLIENTELE

(These figures will be significant only when all replies have been received.)

III. OTHER MEDICAL LIBRARIES

A. Have other medical libraries in area 62
Have no other medical libraries in area 15
No reply to question of other medical libraries 3

Departmental libraries in medical or related sciences.

B. Have other libraries on campus 52
Have no department libraries on campus 21
No reply to question of departmental libraries 7

Libraries which are alone in their area or gave no reply to two above questions 9

IV. LIBRARY SERVICES

A. Hours open per week during school year
Range from 44 to 115½ hours
Mean 76 hours

1. (a) Professional librarian on duty per week
Range from 30 to 98 hours
Mean 44 hours

(b) Is the library open evenings?

yes	*no*
76	4

(c) Is the library open Sundays?

yes	*no*	*no reply*
35	44	1

2. During summer and vacation periods?
(Varies so widely that not tabulated at this time)
3. (a) Do members of the faculty have access to the library during "closed hours"?

yes	*no*
19	61

(b) Does a member of the medical school or hospital staff have a key?

yes	*no*	*no reply*
31	48	1

B–E (To be compiled when all replies have been received)

F. Instruction in use of library and bibliographic method:
1. Is an annual course given?

yes	*no*	*problems only*	*no reply*
47	30	1	2

(a) Is it required?

yes	*no*	*no reply*
42	19	19

(b) In which year?

1st	*2nd*	*comb. 1 & 2*	*comb. 3 & 4*	*no reply*
41	5	2	1	31

(c) Total number of hours:

½ hr.	2	7 hr.	1
1 hr.	2	8 hr.	1
1½ hr.	2	10 hr.	2
2 hr.	6	12 hr.	1
2½ hr.	2	13 hr.	1
3 hr.	5	14 hr.	1
4 hr.	3	16 hr.	1
5 hr.	6	20 hr.	1
6 hr.	6	23 hr.	1

No reply 36

(d) Given by whom?

librarian	*others*	*no reply*
46	5	29

2. and 3. (Not uniformly interpreted. No tabulation made)

G. Special services to users not included under A–F. (Not tabulated)

V. LIBRARY HOLDINGS

A. Number of cataloged volumes in collection:

Range 3,000–275,000 Mean 35,500

1. Serials, including journals, annuals and all other materials issued periodically. (Not tabulated)
2. (See preliminary tabulation of replies to Appendix I.)
3.–4. Pamphlets, theses, reprints, pictures, etc. (To be tabulated later)

B. Current journals

1. (Complete tabulation to be made when all replies have been received.)
2.–3. (See preliminary tabulation of replies to Appendix II.)

C. Holdings satisfactorily cataloged:

1.

100%	*90%–99%*	*under 90%*	*recataloging*	*no reply*
45	21	10	1	3

2. What classification system used:

Dewey	28	Army Medical	6
Library of Congress	26	Cunningham	4
Boston	13	Cutter	1
		Own system	2

3. Have journals and other serials been listed to show holdings?

yes	*no*	*no reply*
76	1	3

4. (Replies not uniform enough for tabulation)

VI. LIBRARY BUDGET

	1948/49	1949/50	1950/51
A. (a) Less than—$ 3,000.00	2	—	—
(b) $3,000.00—$ 8,000.00	6	7	7
(c) $9,000.00—$13,000.00	15	12	11
(d) $14,000.00—$18,000.00	17	14	11
(e) $19,000.00—$23,000.00	6	11	14
(f) $24,000.00—$28,000.00	6	8	11
(g) $29,000.00—$33,000.00	4	2	1
(h) $34,000.00—$38,000.00	3	4	5
(i) $39,000.00—$43,000.00	3	1	2
(j) $44,000.00—$48,000.00	—	3	3
(k) $49,000.00—$53,000.00	1	1	1
(l) Over $54,000.00	4	5	5
No reply	13	12	9

B. This expenditure is approximately — per student enrolled in your medical school.

lowest	*highest*	*mean*	*no answer*
$4	$437	$68	4

C. Indicate approximate per cent of budget spent on each of the following:

1. Salaries:

50% or more	*less than 50%*	*no reply*
48	20	12

2.–9. (To be tabulated when all replies have been received.)

D. 1.–3. By how much is the budget supplemented by exchanges and gifts from various sources?

some	*nothing*	*no reply*
23	23	34

VII. PHYSICAL FACILITIES

A. Is the library situated convenient to class rooms?

yes	*no*
74	6

B. Is it quiet?

yes	*no*
73	7

C. Is it well lighted?

yes	*no*
69	11

D. Is it well ventilated?

yes	*no*
67	13

E. For what percentage of the entire student body do you have table and chair space in the library?

25% & over	*under 25%*	*no reply*
31	42	7

F. 1. Does the librarian have a private office?

yes	*no*
44	36

2. Is there sufficient work space?

yes	*no*
31	49

G. Book stack

1. Percentage full.

90% & over	*under 90%*	*no reply*
64	11	5

2. Is it conveniently accessible to readers and staff?

yes	*no*
72	8

3. Is it in fireproof housing?

yes	*no*
61	19

H. Conference and study rooms.

	none	*under 5*	*5 or more*	*no reply*
1. For graduates.	42	26	7	4
2. For undergraduates.	56	7	5	11

(1 school has 3 rooms for the 2 groups together)

VIII. FUTURE PLANNING

What does your library need most?

space, etc.	*reclassification*	*funds*	*have new bldg. no needs!*	*no reply*
71	1	1	3	4

APPENDIX I

Summary of Statistics on "List of Books and Monographs Issued Since 1940"

Preliminary Tabulation of Replies to May 26, 1952

Total number of questionnaires returned	78	
Completed questionnaires used for tabulations	76	
Total number of titles listed on questionnaire	438	
Greatest number held by 1 library (specified ed. or more recent)	412	94%
Greatest number held by 1 library (specified ed. and earlier ed.)	419	96%
Smallest number held by 1 library	130	30%
Average: (specified ed. or more recent eds.)	283	65%
(specified ed. plus earlier eds.)	307	70%

NUMBER OF LIBRARIES INDICATING

Edition specified (or more recent)	*Edition specified (or more recent) plus earlier ed. (1940 plus)*	*Percentage*
2	8	90–96
5	8	80–89
8	13	70–79
1	11	60–69
2	8	50–59
2	4	40–49
3	1	30–39
—	—	
23	53	

Note: 36 libraries moved to a higher percentage level by including earlier eds.
32 of these moved to the next higher percentage bracket.
4 of these moved to second higher percentage bracket.

TABULATION FOR CATEGORIES

Category with greatest number of titles held in the largest number of libraries:

# 37	(Physics—1 title)	96%

Category with smallest number of titles held in fewest number of libraries:

# 6	(Biology, Biometry—3 titles)	42%

(Note: Of these three titles, one was listed incorrectly.)

Category containing greatest number of titles:

# 31	(Neurology and Psychiatry—35 titles)

Average percentage of titles held by libraries:

ed. spec.	*ed. spec. plus earlier ed.*
60%	65%

Category containing smallest number of titles—1 title each:

# 22	(Heredity)	54%
# 37	(Physics)	96%
# 49	(Venereal Diseases)	79%

PERCENTAGE OF HOLDINGS—ANALYSIS BY CATEGORY

# 30, 37	2	90–96%
# 7, 12, 15, 42	4	80–89%
# 2, 4, 5, 11, 13, 16, 18, 19, 20, 21, 23, 27, 28, 31, 35, 38, 39, 44, 45, 46, 48, 49	22	70–79%
# 1, 3, 8, 9, 10, 14, 17, 25, 26, 29, 32, 33, 34, 36, 40	15	60–69%
# 22, 41, 43, 47	4	50–59%
# 6, 24	2	40–49%

NOTE: 25 categories would have been in next lower percentage bracket if earlier editions had not been included.

ELEANOR G. STEINKE

SECTION ON SERIALS

JUNE 1, 1952

Four hundred sixty-three serials were checked in two ways by 79 medical school libraries in the United States and Canada.

Results were tabulated to show which libraries were subscribing to the journals, which libraries had strong back files of the same titles, and how many libraries subscribed to each title.

Allowing for some errors in tabulating, it appears that the largest institution is subscribing to more than three times as many of the titles as the smallest one. Foreign language journals made the poorest showing.

A few of the journals had changed title or ceased publication altogether, but if the library checked that it was receiving an item, the check was counted. If a "1" was put by the title, the library was counted as having a complete file regardless of any title changes throughout the journal's history. Seventeen libraries did not indicate their back files. Thirteen libraries indicated the holdings of their campus libraries as well as their own.

Nearly complete files covering 50 years or more were counted as complete.

The list was not intended as a recommendation for purchase but as a sampling to see what libraries were ordering and of what they kept long files.

The details ascertained are in the hands of the Committee and are too voluminous to be included in this report.

APPENDIX II

Preliminary Tabulation of Replies to June 1, 1952

Total number of questionnaires returned	80
Completed questionnaires used for tabulations	79
Total number of titles listed on questionnaire	463

Outline of Checking Procedure

Category I (the checks indicating current subscriptions)

a. The total number of subscriptions for each library

b. The total in each subject group for each library

Decisions the Committee made on problems arising in the checking of current titles:

1. Some titles are no longer currently published or have changed title. If the library made a check, it was counted.
2. When checks were not clearly placed, we used our own interpretation as to what was intended.
3. 13 out of 79 libraries indicated that the checks included the holdings of the main library, which in many cases serve the pre-clinical years of the medical school and therefore may well be considered a part of the medical library.
4. When a title was indicated as being "on order", it was counted as being currently received.

Category II (the checks indicating complete files)

a. The total number of titles beginning with vol. 1 (for each library)
b. The total in each subject group
c. The "missing" titles in each subject group when no library listed complete holdings.
d. The "missing" titles in each subject group for the libraries standing in "second place" when there were almost no complete scores.

Decisions the Committee made on problems arising in the checking of current titles:

1. 17 out of 79 libraries failed to indicate back holdings, and 3 libraries indicated them only on the index. The Committee made the entries for these three.
2. Occasionally libraries indicated they had volume 1 plus, but had lost a few issues or an occasional volume. These were counted as complete.
3. If they started with volume 2 or 3 and had complete holdings for over 50 years, they were counted as complete.
4. We counted a "1" whenever the library marked it, although in at least one instance, no volume 1 was ever published. A "1" could thus mean that a library had all of a title that was ever published, or, in cases of title changes, that it had holdings complete from volume 1 including all of the title changes.

CONCLUSIONS:

1. Some titles should be dropped because they have ceased to be published, have changed title, or are so little subscribed to as to be of dubious value to the average library. 59 titles were subscribed to by fewer than 26 of the libraries. These, and other statistics, are listed separately.
2. 40 titles were received currently by all of the institutions.
3. Other titles of much-used journals should be added.
4. The largest holdings starting from v.1 were reported by a library having 432 complete sets and the smallest, 16 sets. 17 libraries failed to record their holdings at all.
5. The largest number of current subscriptions indicated by one library was 456; the smallest was 140.
6. The only title no one reported having a complete set of was the *Journal of the Royal Naval Medical Service.*
7. Some errors in tabulating must inevitably have crept into the report but it is reasonably accurate.

The compilation of the above statistics, which involved the recording and adding of many thousands of figures, would have been impossible without the assistance of the members of the staff of the Stanford Medical Library.

The following journals were subscribed to by all 79 libraries reporting to June 1, 1952:

A.M.A. Archives of internal medicine
A.M.A. Archives of neurology and psychiatry
A.M.A. Archives of pathology
American heart journal
American journal of anatomy
American journal of obstetrics and gynecology
American journal of pathology
American journal of physiology
American journal of public health
American journal of surgery
American journal of the medical sciences
Bacteriological reviews
Biochemical journal
Blood
British medical journal
Bulletin of the Johns Hopkins Hospital
Bulletin of the Medical Library Association
Cancer current literature
Cancer research
Current list of medical literature
Diplomate
Endocrinology
Journal of allergy
Journal of bacteriology
Journal of bone and joint surgery
Journal of clinical endocrinology
Journal of clinical investigation
Journal of experimental medicine
Journal of obstetrics and gynecology of the British Empire
Journal of pharmacology & experimental therapeutics
Journal of the American Medical Association
Lancet
Medicine
Physiological reviews
Proceedings of the Staff Meetings of the Mayo Clinic
Public health reports
Quarterly cumulative index medicus
Science
Surgery, gynecology & obstetrics
Surgical clinics of North America

The following journals were subscribed to by less than 20 of the 79 libraries reporting to June 1, 1952:

Acta biologica Belgica
Annals of applied biology
Archiv für die gesamte Virusforschung
Archivio italiano di anatomia e di embriologia
Bollettino della Società italiana di biologia sperimentale
Bulletin de la Société de pathologie exotique
Bulletins et mémoires de la Société de Médecin de Paris
Cellule
Deutsche tropenmedizinische Zeitschrift
General practioner of Australia and New Zealand
Haematologica
Journal de radiologie et d'electrologie
Journal d'urologie medicale et chirurgicale
Journal français de médecin et chirurgie thoracique

Journal of medicine
Journal of the Royal Naval Medical Service
Nourrisson
Practica otorhinolaryngologica
Proceedings of the American Heart Association
Public health
Revista Argentina de cardiologia
Revue d'orthopedie
Schweizerische Zeitschrift für allgemeine Pathologie und Bakteriologie
Via optica
Zeitschrift für Stomatologie
Zeitschrift für Tuberkulose

CLARA MANSON

Plan and Equipment of the Health Sciences Library, University of Washington, Seattle*

By Alderson Fry

Librarian, Health Sciences Library
University of Washington, Seattle, Washington

THERE is a long history of how the possible location of the library was shunted about until the present location was picked. I held out for the ground floor and a central location, and finally got it. There were changes in the outside dimensions as the sound engineers estimated what size and shape the auditorium should be, and since I was below it, I took my outside contours from it. The problem was, finally, to take three floors, about 65 by 165 feet, and build a library in that space.

First, I drew up eight different plans for a library, trying to make each one different. Then I went through them with a blue and red pencil, marking out or retaining bad and good ideas. This was then combined into one plan (it was already mostly incorporated in the fifth plan drawn) and the problem of making general ideas fit into feet and inches started.

The library is entered from the main lobby of the Health Sciences building. The general plan of the school is that of a cross, with (1) the hospital, (2) the dental school, (3) the medical and nursing schools, and (4) the library and auditorium representing the four projections. Thus one end of the library ties into the other three units at their intersection. We are on the ground floor; back of us is the dental school, to one side the hospital, and at the other side the medical-nursing-pharmacy schools.

Glass entrance doors were a selection of the architects to which I had no objections. Just inside the door, on the right, is a switch panel controlling five mercury switches which allows us to turn off all electricity in the library except the refrigerator. To open the library, since there are no windows to open or close, we simply unlock the door, push up five buttons, and we are in business. Reverse that process and the library is closed.

Next to the switchboard is the display board, a large framed sheet of cork. Directly across from the doors is a bench, and fluted glass shuts off the desk and periodical room. Part of the reason for this arrangement is to keep the noise of the entrance from spilling into the library. Fluorescent lights are used

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

at the ceiling to make the transition from daylight less noticeable. At the end of the bench, as you go down the steps, is an arrangement we call the "botanical garden." There we try to display plants of interest to the students.

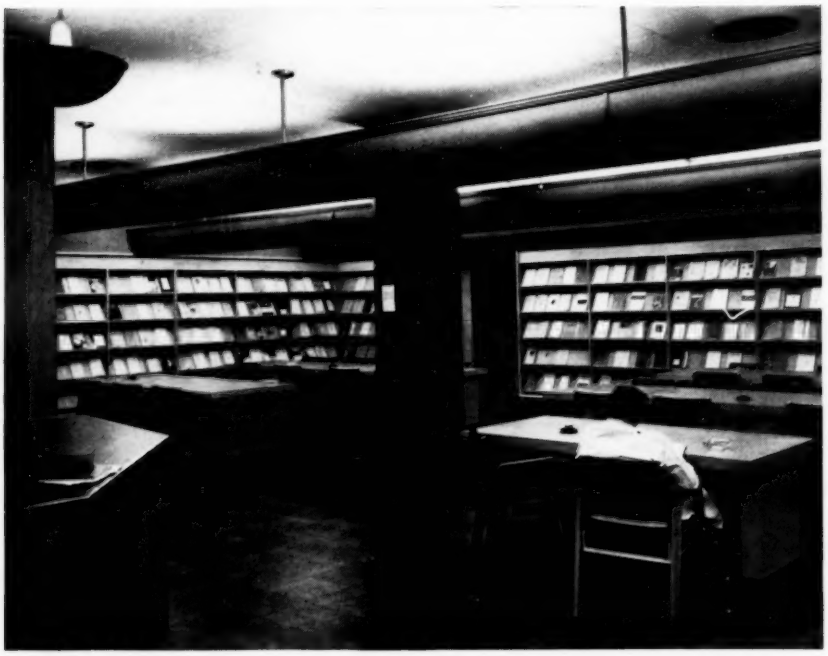
As you come into the library, you come down four steps. To your left is the exit of the outside book drop and a place to put personal books and packages and hang coats. Across these steps shines an electric eye which counts our attendance; this is registered in the work room and taken down at the end of each day.

Main Entrance, Health Sciences Library, University of Washington

Coming down the steps you face a wall cabinet of three shelves, with sliding glass doors, which serves to display uncataloged books and special exhibits. Across from the steps is the charging desk. The reason the entrance thrusts into the room, and the working room and long charging desk were placed opposite it, was, partially, to break the long room into three parts. This and other devices help make a 10½ foot ceiling height optically pleasing. Thus we have the periodical room, the service area, with the charging desk, and the reading room. We use a different type of light fixture at this point again to suggest the change.

Just before you enter the periodical room, and on the entrance side, are two

shelves of general reference material. Here we keep such tools as the unabridged dictionary, a medical dictionary, and the *Britannica*. The periodical room is designed to seat 48 people, and hold 625 periodicals. Neither is sufficient, but we had no more space. The periodical room is U-shaped, allowing the client to see all periodicals. The last four sections, or room for 125 periodicals, to the right as you enter the periodical room but at the end of the alphabet, are set aside to display the current journals. These are cumulated and changed once a week and at the end of the week are merged into the other periodicals.



Periodical Reading Room, Health Sciences Library, University of Washington

We used the periodicals themselves as part of the decor. To give a steeper slope on the shelves than usual, the shelf itself was hinged. This allows a neat and easy-to-see display, and permits us to use the space under the shelf for storage of older current issues. It has been very satisfactory. A door at the end of the periodical room will make it convenient for hospital staff members to come to the library; it will operate with an electric door lock, so the person at the hospital information desk can let doctors into the library and we can let them out with a switch at the desk.

As you come into the library, just past the book display case, is the alcove we devote to reference works, the usual ones. Stand-up tables are used, with

stools, partially to discourage the students from using them for other than reference. The tools themselves are not kept by any system other than that the most useful ones are interspersed with the less useful ones in order to distribute the working space.

Just past this reference center are six rooms, soundproofed with double glass, with four more along the far end of the library. These hold six or more students, and each has a grey-green chalk board. Glass was used to enclose them, permitting supervision from the desk. The rooms keep the library quiet nearly all the

View of main reading room showing study rooms, Health Sciences Library, University of Washington

time by taking off the main floor the inevitable discussion groups. A further reason for these rooms in a medical and dental library is that the groups study together a great deal on the same cadaver, on the same pharmacology, biochemistry, physiology, and other problems. Thus, we provide a place where it can be done in the library without objection. The chalk-boards are in constant use for nerve patterns, chemistry formulae, function outlines, symptoms, etc.

Students typewrite in these rooms without bothering anyone, and are not too far from the library material. We have two typewriters in one room and a dictaphone with lectures in another. The tape recorder and the record-player

for heart records are also used here. Doctors come to the library with their dictating machines to work on articles without removing the material from the library or tying up a secretary. The first room has provisions for connecting it with the hospital call system. We will try to avoid that very annoying problem of calling Dr. Kildare by having all hospital people who spend any time in the library spend it in that room. Journal clubs can also meet here. A telephone will connect this room with the hospital switchboard.

The first of the four rooms along the end has provisions for a slave station to a television camera to be placed in the surgery operatories so the students can see operations without entering the hospital at all. The door latches are a rubber-roller type which work without the usual clicking noise. Light switches should have been the silent mercury type, both in these rooms and on the main floor stacks.

I arrived at the size of these rooms, nine by twelve, to hold table, chairs, and six students, by guessing. Four students would have taken up too much floor space proportionally, and eight seemed to be getting into the noise-making size. Six has been very satisfactory. The four end rooms are bigger, have sealed windows, and give us our only daylight.

On the right side of the library are stacks to hold 12,500 volumes, a size we guessed as being about right for the working portion of the library. Periodicals are strictly by running title. The original decision to keep only English titles on the main floor was changed because a member of the committee considered this undue insularity, and another thought it a shame to hide some foreign sets for which we had paid so much; so now the last twenty years of most journals are kept on the main floor and the remainder downstairs.

Against the wall through the stacks are eleven individual carrels, some with incandescent lights and some with fluorescent. Thus on one side of the library, studying can be in groups, on the other in solitary splendor. Up near the workroom is the stair to the lower floor, and the booklift. Just outside the workroom is a washbasin and water fountain. At one end of the work room is a combined sink and work table with electrical outlets, also cupboards, storage space, and supply drawers. In the rest of the room, helter skelter most of the time it seems to me, are eleven vertical files, a very old fashioned card file which holds a wonderful amount of cards, telephones, working desks, trucks, tables, shelves, a coat rack, and litter. The door out to the charging desk opens so we can supervise it from the workroom.

In front of the workroom and across from the main entrance, is a 26-foot custom built charging desk, with built-in space for files, drawers, foot room, book shelves, and four waste baskets. Because the desk was 25 inches deep, we put a partition down the middle so books would not get lost on shelves too deep, and on the front of the desk we placed panels to cover the shelves on that side which we are not yet using. Back of the desk on the wall of the workroom, are fifteen running feet of shelves for reserve material, unbound copies of

the most used magazines in second sets, and other items, such as books being held, reserves, and so on.

Thus when you enter the library, you quickly reach a point just in front of the charging desk from which there is available to you, and in sight, the reference tools, the study rooms, the reading room, the bound periodicals and book stacks, the charging desk for questions, returns, reserves, and the periodical room. We followed department store planning in trying to make the library entrance psychologically pleasant. The steps have a slight slant to them; the posts are rounded; the corners of the desks cut off. We hope you can enter easily and find quickly what you want.

We have used limed oak plywood throughout to keep the library light and because it is cheaper by far than plaster. The ceiling is soundproofed, and ten and one-half feet high. The architect wanted eighteen, then fifteen feet, but we kept them down. We thus avoid a sound-chamber effect, and by keeping the ceiling down and the temperature differential between floor and ceiling about equal, we avoid convection currents which would pick up dust and even dirt from the floor and eventually put it on the books.

At first we had some really strange lights, incandescent, in large aluminum troughs, but since they took 60 kilowatts to light the library indirectly, and the heat in the summer was terrific, we finally pulled them out and put in egg-crate fluorescents which have been very satisfactory. The floor is cork, wonderful to walk on but hard to keep the janitors from ruining.

The tables are 29 inches high, one less than usual, as an experiment which has worked. They are 8 feet long and 40 inches wide with linoleum tops, and uniform throughout. The chairs are varied. In the reading room we use the standard straight back saddle-seat chair, and a banker's type, finished with red plastic cover and chromium studs. The chairs in the periodical room we designed by combining two other chairs, because it was impossible to find one within our price range which was modern and would look well alongside of the heavy tables. In the study rooms we have four different types of chairs on the assumption that people are different in size; the problem obviously had many aspects to it. The chalk-boards are grey-green, as black would have "sunk" the decor of the entire reading room. On them we use white and yellow chalk, and have available other colors of chalk for ambitious students. These boards have proven extremely useful and used.

The downstairs floor is mostly for storage. As you go down the steps, you enter into the stack range. Right at the foot of the steps is the book lift. Around the corner are the toilets, the staff room, and the receiving room at the end. The receiving room would have been under the work room, probably, but I knew from experience that the library is first to sacrifice space when the dean or president goes out hunting for some, so I figured I should keep it busy enough to deter them. We never clear the shelves too much. (And I was right; so be warned. The dean of the dental school was out hunting office and laboratory

space six weeks after the building opened—the building that was built, as we all had agreed and planned, for the future.)

On the side opposite from the steps are four rooms of varying size. One is for photoduplication, our microcard and microfilm readers, and book-mending. The other three serve groups from 12 to 40 in size. A minor problem is to keep some department from scheduling them as classrooms.

At the far end of the library is a room that was built, among other things, to protect me from a bureaucratic state. I had experienced that system where you can throw nothing away, not even a completely broken-down chair, without filling in a form which asked for price, length of time used, cost of replacement, cost of repair, estimated value at present, use served which was essential, and so on. So I planned a room in which I could lock all broken furniture, all empty boxes one thinks he is going to use, all gifts one can't figure out what to do with, defunct records, and the rest of the junk which comes but never goes. In this room it would be in one place for my successor to worry about it. However, the State of Washington is a very fine one to deal with; old furniture is picked up and moved out immediately. That room is used to store cataloged, but not very useful, books.

The staff room has a combined kitchen unit which includes a stove, sink, refrigerator, and storage space. It has an intercommunication system connecting it with the rest of the library, and a phone. It has also a coffee maker which allows the person alone on the desk to start coffee, and then not worry if busy at the desk, since it automatically brews and keeps the coffee hot.

Our "intercom" system connects the desk, my office, receiving room, and the staff room. There are phones at the desk, in the work room, in my office, and in the staff room. All doors which lock are on one key. Switchboards controlling all lights individually are located at the head of the steps. Stack aisles are 38 inches wide to allow easy use. Each of the outside windows at the end of the library has a radiator to keep the room from being cold.

Our space for future expansion is a third floor the same size as the two described, and is under the 2nd floor. It will be used for book storage only, I think. Right now there isn't even a stairs to it. I had it sealed off completely, fearing that if all that empty space were on display, someone might ask me to move out of some part of the second floor. So when we need it—which will be much sooner than I had thought—we will cut through the concrete under the other stairs to get into it. Very few people know of its existence.

If I have given you the impression that I am satisfied with my library, that is the correct impression, but there are some things I would change. The tables should have less lip on them, so students could more readily cross their legs under the tables. I am not sure I would use cork for flooring again. It is excellent to work on and quiet, but it is expensive, difficult to keep waxed, and a trifle drab when you consider what can be done with rubber tile, for instance. I would make a separate place to display new periodicals, instead of putting them

right after the others which leads to some confusion. I would make the shelves for the current periodicals two inches wider so they could hold six titles each. I would cut the toilet space to a minimum, and put the toilets against the outside wall to eliminate their noise coming through an inside wall. I would have an outside entrance to the library in addition to the one off the main entrance. I would use another ventilation system. We have amistets which bring in fresh and heated air on the ceiling, and the air is taken off at floor level. This works wonderfully in the winter, giving a proper temperature without air with too much movement in it. In the summer it is poor. The lights heat the top air which must, then, pass the patron on its way out on the floor level. Therefore, the inside is hotter in the summer than the outside. A simple solution would be a system which could be reversed in the summer with the air coming in on floor level and leaving at the ceiling.

If I were building again, I think I would still have no windows. We clean our air electrostatically, and after four years the books have not been dusted nor do they need dusting. But I am not sure one shouldn't have at least two windows, well-sheltered, one on each side of the library, to allow the air which accumulates when the library is closed, to drift out. Otherwise, the fan system must be kept going, or the library accumulates heat on hot days which is damaging to the books, and gives a slightly stale odor which takes a while for the fans to dissipate.

If I were building again, I would trust nobody connected with the architect, including the architect himself. There should be a liaison officer whose duty is to call to the attention of the librarian every single change made in the plans by anyone else. We had some changes I didn't want because I didn't read the blueprints time and time again. We almost had a janitor's closet nine feet wide and 28 feet long, space to be taken out of the periodical room, because the architect decided that was a good place to put one. I thought I could leave lighting and ventilation and heating to the engineers, who could do no wrong. I was wrong.

My advice is, if you have a library to plan, spend some time looking at new restaurants, beer parlors, banks, stores, just any new building. Go through supply catalogs for equipment ideas. Think of the user and not the librarian or the cataloger, and keep in mind that operational costs are high and getting higher. Ask for constructions and space you don't need so you can grudgingly give them up for items you must have. Plan for the student rather than the researcher or faculty, for the trained men will find their material no matter what you do with it. Forget you are a librarian, used to quiet places, and "holler like a stuck pig" when someone meddles with your plans unduly. Practice getting real mad, and also read *How to Win Friends and Influence People.* And lastly, but highly impractical, write out your resignation and use it if you have to.

The Welch Medical Library Indexing Project*

By Sanford V. Larkey, M.D.

Director and Librarian, Welch Medical Library
Johns Hopkins University, Baltimore, Md.

I AM very happy to have this opportunity to report to the Association on some of the aspects of the Welch Medical Library Indexing Project, which has been going on now for about three and one-half years. This research program is supported by the Armed Forces Medical Library through a contract between it and the Johns Hopkins University.

The background of the project—how the Welch Library, after World War II, was interested in a program for training medical librarians with the necessary research aspects; the interest expressed by the then Army Medical Library in the research side of the program; and the eventual negotiation of a research contract—has already been given in the Bulletin in the report of the meeting of the Honorary Consultants to the Army Medical Library of 1948[1]; so I will not repeat the details here.

Our own plans covered a fairly large area of medical bibliography, but with particular emphasis on the problems of indexing of periodical literature, including, by extension, the related aspects of abstract journals, review journals, etc. I believe the statement of the scope of the project, as given in the contract, will give some idea of the general picture:

"To study the problems of indexing medical literature.

To explore the theory and practice of subject heading (nomenclature) and classification (coding) as they concern medical literature.

To explore existing and projected methods, emphasizing machine methods, applicable to medical bibliography, operating such pilot projects as may be necessary, and to report on the suitability of machine methods in the bibliographic operations of the Army Medical Library."

As you can see, the first sentence covers a very large area and really states the whole problem. When taken in connection with the other two points, this charge has worked out in practice to mean the evaluation and study of present

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

[1] Larkey, Sanford V. The Army Medical Library Research Project at the Welch Medical Library. Bulletin, 37: 121–124, April 1949.

indexing and abstracting services, including studies of their coverage of the medical literature, of their methods of indexing, and of their use.

One way to learn something about how indexing and abstracting services are used is to ask those who use them. We decided to do this, asking directly through interviews rather than by questionnaires. We interviewed a fairly large number of medical librarians and scientists, and many of you generously took part in such interviews at the Galveston meeting. The analysis and study of these interviews gave us many valuable leads, but in the meantime there have been so many changes in the indexes and abstract journals, that further studies along these lines will be needed.

Studies have been made of the coverage of journals and of articles within journals by individual services, but a detailed analysis of the coverage of all or almost all medical literature requires a knowledge of what periodicals are available in the world in medicine and related fields. Since a principal objective of the project in this regard was to determine the scope and coverage desirable in a medical index, with special reference to one published by the Armed Forces Medical Library, it was decided to compile a list of the world's medical journals, on IBM punched cards, with facts included which would give information as to scope, coverage by indexing and abstracting services, and features for evaluation of the journals as to their possible inclusion in a medical index. Details of the present status of this part of the project will be given later in the paper.

Similarly, I will defer discussion of the other aspects, namely subject indexing and subject headings, and machine methods, although work on all phases has been proceeding simultaneously. Since progress reports on all aspects of the project have been given every year to the Honorary Consultants to the Army Medical Library and published in the BULLETIN[2], it is not intended to review these developments but to tell now only of the present status of certain things we are doing.

PSYCHOLOGY OF MACHINES

I think I should say something about "machines" themselves at this point. Since we are using machines in all the major phases of our work, I would like to describe the machines we are using and just how we are using them. I will discuss the present status of each phase of our work primarily on the basis of the machine operations involved. Another reason for this approach is that we have found in discussing our program with others, our use of machines seems either to interest or worry people more than any other feature.

This brings me to what might be called the "psychology of machines." The very word "machines" seems to do things to people. We hear talk of "electronic robots," as though they were some sort of "men from Mars" who could take

[2] BULLETIN, 38: 113–116, April 1950; 39: 87–89, April 1951; 40: 107–112, April 1952.

over all intellectual activities by merely pushing buttons. This sort of talk leads to excessive hopes or to inordinate fears and precludes objective thinking about the possible uses of machines. One should consider machines as practical adjuncts, as we do typewriters, 3 x 5 cards, and visible indexes. Machines are only doing very rapidly what one could do with his own eyes and brain if he had all the time in the world to do it and wanted to do it. There is no magic about it.

There is, however, a more valid psychological aspect to machines. Since machines operate on a strict yes-or-no principle, we must be rigidly exact in presenting a problem. Each step must be in the most precise logical form, since one rarely can stop to correct as one goes along. Each step must be gone over and over in relation to every other one. One has to think not once, but many times. Programming often takes almost as long as the machine operation itself, but the end result is still reached much more quickly than by manual operations.

These strict limitations of machines have been very useful to us. They not only have tightened up our own thinking processes, but their application has emphasized many semantic inconsistencies in our terminology and classifications. So, perhaps there may be a good psychological side to machines.

Machines and Our Use of Them

Our machines at least have a very respectable genealogy. As Raymond Pearl[3] has pointed out, it was John Shaw Billings, who, while working on the 1880 census, suggested to Mr. Herman Hollerith the idea of punching holes in cards for recording data and then sorting by mechanical means. Mr. Hollerith invented the basic IBM machines. It is not known if Billings ever thought of applying the principle to bibliographical work, but it would seem eminently fitting that it might be so utilized.

The machines we are now using in the project are all IBM equipment and I will confine myself largely to a description of these and of our uses of them. Most of these machines were designed primarily for statistical and accounting uses, including tabulating, and their application to or modification for our purposes is one of the tasks confronting us. There are, however, many operations which are applicable to our purposes, and we are trying to make the best use of them.

I think it will be well to describe what the machines can do in some detail, since it will make clearer what I will have to say about our application of them. I will speak of these functions in terms of the card, because cards are our units of information, on which have been punched items of information, either numerically or alphabetically as words or abbreviations. Codes could be either or both. Probably the basic thing a machine can do is to *sort*, that is, pick out

[3] Pearl, Raymond. Some contributions of Dr. John Shaw Billings to the development of vital statistics. Bull. Inst. Hist. Med. 6: 387–393, May 1938.

cards which have a common characteristic or characteristics and put them together in packs. A machine can *count* these cards or certain points of information punched in the cards. Another machine, the collator, can *match* like cards or various punches in cards, and *merge* two decks of cards in a numerical or alphabetical sequence. Other machines, the tabulators and card-operated typewriters, can *print* what has been punched on cards.

A special type of sorting is what has been termed "searching." This involves the selecting out of cards which meet complex requirements of punches or combinations of punches. This procedure can be carried out with some of the ordinary standard machines, but would take so many steps that it would not be practical in point of view of time and effort except for very small files of cards. The problem is now being approached by means of much more elaborate IBM machines—the 101 and another designed especially for this purpose.

We are using or have some familiarity with all of these IBM machines. The first group of machines are those used for preparing the cards. Our cards are prepared with an interpreting punch which simultaneously prints on the card what has been punched. Cards are then checked on the verifier if necessary. A reproducer is used when duplication of a large number of cards is desired or when there is a common item to be punched into a number of cards. This latter operation is known as "gang punching." By use of prepared number decks or special attachments, continuous serial numbers can be punched in a file of cards. We have used other standard machines for sorting, collating, and printing. We are now using the IBM 101 electronic statistical machine for most of our sorting but particularly for searching.

IBM machines are activated by an electrical current set up by contact of brushes through the holes punched in the cards. The operation of the ordinary sorter is relatively simple. Operating on only one column at a time, an electric impulse is initiated by the brush contact through the hole in the card. The impulse travels through a set of electro-magnetic relays and causes a chute to open. This directs the card to a pocket corresponding to the punch in the column. But it is when more complex patterns are needed that the electronic element comes in, as in the 101; for here, a great number of matching operations, that is, matches between what is desired and what is punched in a card, are performed in an amazingly short period of time. This is accomplished by setting up on a wiring board, somewhat like a telephone switchboard, extensive and complicated selector circuits which send currents through series of electronically controlled relays. Such electronic set-ups are used in many of the more complicated IBM machines, and notably in the 101. Such a system is almost essential for any high speed searching device. Our work covers a wide range of these operations, from the simplest to some of the most complicated. In some phases we have used machines almost entirely as a research tool while in others the machine is the all-important or essential feature. I intend now to

describe certain areas of our work, emphasizing the role of the machines, but also to tell you something of the overall status of our work in these areas.

Subject Heading Studies

One of the great difficulties in compiling and in using indexes of any kind has been that of the subject headings themselves, the essential key to the index. There has been little standardization of headings used by various indexes and even inconsistencies in usage within a single index. A great deal of this trouble stems from basic inadequacies and inconsistencies in medical terminology and nomenclature. Subject headings have attempted to keep up with changing terminology, but since the headings are usually in alphabetical lists, it is very difficult to work out relationships. It was our plan to transform alphabetical lists of subject headings to a categorized arrangement. We started by using conventional 3 x 5 cards, typing on these cards the headings and cross references with complete tracings, from *Quarterly Cumulative Index Medicus*, *Index-Catalogue*, and other sources. Category arrangements were then attempted. Preliminary results of these studies convinced us that we were on the right track. For instance, striking discrepancies were shown up in the field of chemistry.

It was not until last year that we began to use punched cards for this part of our work. We started then to put on punched cards all the headings used by *Current List* in the first five months of 1951. The actual heading was put down in full by alphabetical punching and code numbers punched for category sorting. As it turned out, we were very glad we had gone over to punched cards, for this file was the basis for the later studies for revision of the *Current List* headings now being used.

I am not going to say much about the basis for the revision since Mr. Seymour Taine will tell of that. I will only mention some of the machine features. By category sorting and then printing lists from the punched cards, we were able to study the terms used in restricted fields and to compare them against other authorities. For instance, having based our category code for diseases on the World Health Organization International Statistical Classification, we sorted on these code numbers and then could compare the terms used by *Current List* with all the terms in the WHO classification for each specific group of diseases. The staff of the *Current List* and the project cooperated on similar studies for all of the categories, and the revised cards constituted the main subject heading deck.

See and *See also* references were punched on cards and by machine methods put in the proper order with the main subject headings. Lists were then printed from the cards. This was the tentative authority list. The next step was to add the tracings, *See from* and *See also from* cards. A good part of the compilation and punching of these was done by machine methods. The last printing was

done directly onto Multilith mats, making it possible to produce a large number of copies of the list. Here we have made most extensive utilization of the *printing* function of the machines.

We will continue our category studies, with comparison of terms from many other sources. While we realize we can never have a permanent standard authority, we hope we can make an approach to something like this and to have a method for logical and fairly easy revision.

Journal List on Punched Cards

In the compilation of the list of the world's medical serials on punched cards, the machines were intended to be used primarily as research tools. Since analyses of scope, coverage by indexing and abstracting services, and evaluation of the thousands of titles require compilation and study from a number of different axes, it was believed that machines would be a great saving of time and would provide more extensive and accurate statistical data. At the same time, the sorting and printing features of the machines would enable us to have preliminary groupings or listings along any line desired. We now have about 7000 serial titles represented in our file.

The information about each journal has been taken from the journal itself, from the latest issue for current information (title, sponsorship, country, publisher, language, frequency, etc.) and from a whole volume for more general information (type, contents, and subject fields covered). To date, information has been assembled from the Armed Forces Medical Library, the Library of the American Medical Association, and the Welch Library. Preliminary checks have been made against the holdings of the New York Academy of Medicine and the Library of National Institutes of Health. The staff of the Armed Forces Medical Library is supplying us with data sheets of information on its holdings and we could not have done anything without its help.

After the information is collected, it is then punched on cards as follows: a number code for alphabetizing, abbreviation of the title, code numbers for language, country, frequency, type, contents, and major and minor subject fields. In addition to this information about the journal itself, other types of information are being assembled and punched in code on the cards. These include coverage by indexing and abstracting services, holdings by libraries, inclusion on selective lists, such as the MLA list of recommended periodicals.

We are thus able to make analyses from many different points of view. We have made a number of preliminary studies which have included statistical studies of coverage by *Current List*, *QCIM*, *Excerpta Medica*, *Biological Abstracts*, and *Chemical Abstracts*, comparative studies of the coverage by combinations of these, studies of coverage by country and by subject by *Current List* and by *QCIM*, and listing of indexing and abstracting services, and of other journals publishing indexes and/or abstracts. Some of the studies

describe certain areas of our work, emphasizing the role of the machines, but also to tell you something of the overall status of our work in these areas.

Subject Heading Studies

One of the great difficulties in compiling and in using indexes of any kind has been that of the subject headings themselves, the essential key to the index. There has been little standardization of headings used by various indexes and even inconsistencies in usage within a single index. A great deal of this trouble stems from basic inadequacies and inconsistencies in medical terminology and nomenclature. Subject headings have attempted to keep up with changing terminology, but since the headings are usually in alphabetical lists, it is very difficult to work out relationships. It was our plan to transform alphabetical lists of subject headings to a categorized arrangement. We started by using conventional 3 x 5 cards, typing on these cards the headings and cross references with complete tracings, from *Quarterly Cumulative Index Medicus*, *Index-Catalogue*, and other sources. Category arrangements were then attempted. Preliminary results of these studies convinced us that we were on the right track. For instance, striking discrepancies were shown up in the field of chemistry.

It was not until last year that we began to use punched cards for this part of our work. We started then to put on punched cards all the headings used by *Current List* in the first five months of 1951. The actual heading was put down in full by alphabetical punching and code numbers punched for category sorting. As it turned out, we were very glad we had gone over to punched cards, for this file was the basis for the later studies for revision of the *Current List* headings now being used.

I am not going to say much about the basis for the revision since Mr. Seymour Taine will tell of that. I will only mention some of the machine features. By category sorting and then printing lists from the punched cards, we were able to study the terms used in restricted fields and to compare them against other authorities. For instance, having based our category code for diseases on the World Health Organization International Statistical Classification, we sorted on these code numbers and then could compare the terms used by *Current List* with all the terms in the WHO classification for each specific group of diseases. The staff of the *Current List* and the project cooperated on similar studies for all of the categories, and the revised cards constituted the main subject heading deck.

See and *See also* references were punched on cards and by machine methods put in the proper order with the main subject headings. Lists were then printed from the cards. This was the tentative authority list. The next step was to add the tracings, *See from* and *See also from* cards. A good part of the compilation and punching of these was done by machine methods. The last printing was

done directly onto Multilith mats, making it possible to produce a large number of copies of the list. Here we have made most extensive utilization of the *printing* function of the machines.

We will continue our category studies, with comparison of terms from many other sources. While we realize we can never have a permanent standard authority, we hope we can make an approach to something like this and to have a method for logical and fairly easy revision.

Journal List on Punched Cards

In the compilation of the list of the world's medical serials on punched cards, the machines were intended to be used primarily as research tools. Since analyses of scope, coverage by indexing and abstracting services, and evaluation of the thousands of titles require compilation and study from a number of different axes, it was believed that machines would be a great saving of time and would provide more extensive and accurate statistical data. At the same time, the sorting and printing features of the machines would enable us to have preliminary groupings or listings along any line desired. We now have about 7000 serial titles represented in our file.

The information about each journal has been taken from the journal itself, from the latest issue for current information (title, sponsorship, country, publisher, language, frequency, etc.) and from a whole volume for more general information (type, contents, and subject fields covered). To date, information has been assembled from the Armed Forces Medical Library, the Library of the American Medical Association, and the Welch Library. Preliminary checks have been made against the holdings of the New York Academy of Medicine and the Library of National Institutes of Health. The staff of the Armed Forces Medical Library is supplying us with data sheets of information on its holdings and we could not have done anything without its help.

After the information is collected, it is then punched on cards as follows: a number code for alphabetizing, abbreviation of the title, code numbers for language, country, frequency, type, contents, and major and minor subject fields. In addition to this information about the journal itself, other types of information are being assembled and punched in code on the cards. These include coverage by indexing and abstracting services, holdings by libraries, inclusion on selective lists, such as the MLA list of recommended periodicals.

We are thus able to make analyses from many different points of view. We have made a number of preliminary studies which have included statistical studies of coverage by *Current List*, *QCIM*, *Excerpta Medica*, *Biological Abstracts*, and *Chemical Abstracts*, comparative studies of the coverage by combinations of these, studies of coverage by country and by subject by *Current List* and by *QCIM*, and listing of indexing and abstracting services, and of other journals publishing indexes and/or abstracts. Some of the studies

have been previously reported in the BULLETIN. I might say that one form of information most difficult to come by is that of coverage. Very few services publish lists of the journals they cover and we have been eagerly awaiting the publication of *Periodica Medica Mundi*. If it does not appear soon, we may have to go through the entire year's file of a service to pick out the journals covered. Even this might be worthwhile, for we believe an analysis of this coverage would be a valuable thing in itself and a factor in evaluation.

Our earlier analyses were done with a standard Sorter. Now that we are using the 101 machine, we will be able to make more complicated analyses, generally at one pass, and also have counts on all items registered by machine. At the present time we are working at bringing our file up to date, planning for adding information on additional items of information that we can dig out. We plan to set a deadline in the late fall and then to begin a series of detailed analyses, leading to evaluation studies.

One of the advantages of having such a file on punched cards is that it can easily be integrated with similar punched card files, such as those proposed by the Library of Congress. At present we have a limitation in the printing feature of the machine, in that we can print from our card only an abbreviated title. This is really all that is necessary for a research tool, but as the demand arises for printed lists with full title and publisher, we will have to provide additional cards to do this. We have worked out designs for these.

MACHINE INDEXING AND SEARCHING

The term machine indexing has acquired two rather different meanings. In the first place it may mean the preparing and printing of a printed index by machine methods, or it may mean an information searching system wherein the various subject concepts of a document are represented in code on punched cards, or on other media, and a machine is used to select out the desired items.

There are a number of instances of printed indexes produced by machines but not, so far as I know, in the field of medicine. We are considering, on an experimental basis, the possibilities of preparing the entire *Current List*, by machine methods. Mr. Eugene Garfield of the project has worked out a detailed procedure, utilizing a number of IBM machines. I want to emphasize that the machine cannot perform the intellectual side of reading articles and of subject indexing. The machines take over only after this has been done. All of the entries, as they now appear in the *Current List*, in the Register and in the Subject and Author indexes, will be on punched cards. All of the numbering, sorting, merging with subject and cross reference entries, and arranging in alphabetical and subject order will be done by machine. The copy for photo-offset printing, except at present for the Register entry, will be printed from the punches in the cards. I will not go into any details now, as we are just beginning our first pilot run. If the method appears to be practicable, we plan to study its application to other types and formats of indexes.

Because there has been a feeling that modern science demands a more rapid, a more thorough, and a more detailed correlation of the facts set forth in scientific literature than apparently is possible with present printed or card indexes, attention has turned to machines as a way of accomplishing this. In a machine searching operation, the facts or subject concepts of a document must be symbolized by codes which can then be represented by punches in a card. The fundamental practices of analysing a document, let us say a periodical article, are essentially the same as in present subject indexing. One must still read the article to find what it is about and what are its salient facts. Assuming this, the various subject concepts in the article are assigned code designations from a pre-arranged code. The code designations for all of the subject concepts in an article are then punched on a card or cards, along with a serial number identifying the document. It is the code numbers for which the machine searches, correlating those in the card or cards representing a single document for answers to a specific question requiring a certain combination of code numbers.

Suppose, for a simple example, the number 90015 represents the concept *pulmonary tuberculosis* and 35062 *Streptomycin*. If one wanted all articles on streptomycin treatment of pulmonary tuberculosis, the machine would be set to pick out all those cards which have both of these numbers punched in them. In our earlier work with a sorter and collator, it was necessary to have the code numbers for various categories in a fixed order and in a fixed place on the card. This was also true of earlier work with the 101 machine, but now Mr. Garfield has worked out an amazing but fundamental wiring system for the 101 which permits searching for any 5-digit number in any one of 16 five-column fields on a card. His system permits searching for up to 48 such 5 digit numbers in various combinations at one time. This will allow a number of separate questions to be asked at one time.

At present we are experimenting with arbitrary numerical codes but will soon use actual coding from indexing articles. I will not give any details since the project will prepare a comprehensive report. One should realize though what the machine is doing here. As described earlier, there is a very rapid matching operation going on for each card, correlating the desired combinations of all these 48 individual codes with those codes punched in the card. The cards are going through the machine at the rate of 450 a minute.

Machines may speed up searching operations; they should permit greater depth of indexing and possibly greater coverage of the literature; and there should be greater possibilities of correlation since the machine can search for any combination of concepts. Whether these advantages will outweigh the values of printed indexes or partially so, only time and more study will tell.

Summary and Conclusion

I have tried to tell you of some of the problems we have been working on and where they are leading us. I still believe, as I said almost four years ago, before

the project started, "that our present indexes are extremely valuable bibliographical aids and that while a search is being made for new methods, including machine methods, the improvement of these indexes in something like their present form must be a primary consideration."[4] A great deal of our work has been along these lines. It is quite possible that machines will help in solving some of the problems. We have found that their practical application has been greater and more useful than we had anticipated. Familiarity has bred anything but contempt.

In conclusion, I should like to point out that, while our work and our findings are primarily for the use of the Armed Forces Medical Library, we feel that they will be applicable to other fields just as we have profited greatly from work others are doing. Coordination of research in bibliographical problems in all fields should benefit all.

[4] Larkey, S. V., op. cit.

The Subject Heading Authority List of the Current List of Medical Literature*

By Seymour I. Taine

Chief, Current List Division
Armed Forces Medical Library
Washington, D. C.

ANYONE who has ever had anything to do with a library catalog, a bibliography, or subject heading authority list has surely experienced at least one moment when he has fervently wished that: 1) the person responsible for the accursed instrument would be consigned to eternal perdition; 2) he could himself have the opportunity of doing the job, thereby proving once and for all time how it really should be done. Fulfillment of the first wish would probably have the result of throwing the individual into the distinguished company of many of our most illustrious predecessors, since all of us have probably, to some degree, bibliothecally contributed to the annoyance and displeasure of others. Few of us are, however, ever afforded the opportunity voiced in the second wish of developing a subject heading authority list from scratch. The staff of the *Current List of Medical Literature* found itself in just such a situation recently; though it was a challenging situation, it would be somewhat of an understatement to say that the participants in that project considered it to be an enviable predicament.

The new *Current List*, which was evolved in July 1950, at first utilized the already existing authority list of a medical periodical index, that of the *Quarterly Cumulative Index Medicus*. This soon proved to be unsatisfactory for reasons entirely independent of the merits of the list proper, though the published list was already more than ten years old and actually out of print. This latter shortcoming could be resolved by making the essential changes in order to bring the list up to date and this was, of course, what was actually done by the *QCIM* itself during that decade. More fundamental difficulties were the differences of format and of method of composition of the two publications. During the July to December 1950 period, when a main heading and short, standardized subheading only were utilized in the subject approach, the problem did not loom very large, but, with the change in 1951, to a subject heading consisting of a main heading and relatively lengthy, freely derived subheading,

* Read at the 51st Annual Meeting of the Medical Library Association, Lake Placid, New York, June 24–27, 1952.

there was a real departure from the type of approach for which the list was originally conceived. It had been apparent almost from the start that sooner or later an authority list expressly designed for the *Current List* would have to be evolved; operational exigencies delayed, however, the inauguration of this project. The time had come when no amount of pressure of the moment could put off the creation of a new list.

In Spring 1951, the various changes which have since become a reality in the 1952 *Current List* were projected and a plan of attack was drawn up for the compilation of a new subject heading list. This first plan called for the accomplishment of the entire task by Armed Forces Medical Library personnel alone by means of a division of labor of large subject areas, such as blood, brain, heart disease, labor, etc., with a subsequent integration of the individual segments into the total list. It is of more than passing interest to note that this plan had to be abandoned due to the unshakable conviction of one of the medical members of the team that this was an impossible assignment. What is of interest here is not the conviction itself—for we often shared that—but rather, the pattern of least resistance one must contend with in the management of a project of this nature. In this instance, the path lies in the direction of endless theorizing and barren discussion of the problems instead of sinking one's intellectual teeth into the meat of the problem itself. In our experience we did not come upon any royal road to the subject heading panaceas, nor were there ready formulas waiting; few precedents exist, though an abundance of tantalizing problems do. In order to complete the task in sufficient time for the *Current List* Subject Headers to begin work on the 1952 material, the Indexing Project was approached for assistance, and with Dr. Larkey's gracious consent, an agreement was reached to work together in the formulation of the list.

In the initial outlining of the assignment, it was agreed that we should avail ourselves of the fine progress made by the Project in the categorization of subject headings for use in IBM machine coding. Sixteen categories, such as organisms, pathological conditions, physiological terms, and anatomical sites, had tentatively been established and the headings used by *Current List* had been coded and punched on IBM cards. Incidentally, a good deal of time at the outset was devoted to the setting up of the precise card form to be used in the IBM punching. An ingenious method was finally devised to enable us to code, sort, and tabulate by both parts of the cross references—coming and going, as it were.

Individual members of the six man team, all of whom devoted only part time to this task, were each assigned a category, and given the special responsibility of working it up to a point where it could be examined and criticized by all. It is no exaggeration to say that each day revealed new problems which, by their own solution, frequently, in turn, engendered new ones. Almost every subject field had its own authority, upon which we attempted to lean, and many of these tools have already been cited by us in the published preface to the

January 1952 *Current List*. It is, however, misleading to believe that an "authority" is a magic key that opens the door to all subject heading solutions. All too frequently the key will fit many locks and open many doors and the decisions still remain to be made as to which one to enter. Faced with the necessity of establishing a level of specificity on a middle ground appropriate to a consumer group as heterogeneous as the *Current List's*, the authorities and the knowledge they embody had to be converted and adapted to our special purposes.

As the work on each category neared completion, all heading and cross reference cards were sorted out and tabulated. By this means we were enabled, by inspection of a single, relatively small list, to examine critically all of the entries in an entire subject bloc. This is a task rather difficult and time consuming in working with the entire alphabetical list. In some instances, the Drug and Chemical Category in particular, more than one run and critical survey were needed prior to the ultimate recombination of the categories into alphabetical order. Simultaneously, work was progressing on the choice of standard subheadings, with the attendant problems caused by the combination of main and subheading. As we neared the end of the allotted time, another truth began to be borne in upon us, namely, that the completion of an authority list is like a mirage. Eight months of experience since that time, when the "completed" list went into use, have confirmed this suspicion.

The list finally used by the *Current List* consisted of 6335 IBM cards, which included main headings, cross references "see" and "see also," and runovers. (The present list contains over 9000 cards.)

On 11 October 1951, the *Current List* Subject Headers began a detailed orientation to the new list and its three levels of subject breakdown. The list was perused page by page, and the scope, definitions, and limitations of the main headings were pointed out and discussed. The standard subheadings, largely to be used under five of the categories, were defined and their use explained. The approach of choice to be employed in the composition of the subject heading modification (the second subheading) was discussed and on 24 October, the new system went into effect officially.

Since the initial tabulation was completed on the provisional list, many changes have been made. The "see from" and "see also from" references have been added; useless and anomalous headings have been eliminated; new groupings of materials have been made; new headings and new cross references have been made. Upon completing a volume of the *Current List*, a survey will be made to make the necessary adjustments dictated by the actual material encountered. The first semiannual survey is already underway now in the *Current List*, and after the next survey has been made, we expect to prepare the list for publication and public sale. The suggestions and advice of all medical librarians will be of great value in making the authority list a useful adjunct to the *Current List of Medical Literature* proper.

Foreign Dental Periodicals*

By Mrs. Helen Kovacs

Periodicals Librarian, School of Dentistry Library
University of Alabama
Birmingham, Ala.

FOREIGN dental periodicals have occupied an important place in dental literature since the founding of modern dentistry. As will be shown later, the early important developments are all recorded in this literature, even though American dental practice and research have in recent times become predominant in this field. Even now, approximately one-half of current developments in research and clinical practice are to be found in journals appearing in languages other than English, especially in French, German, Italian, Spanish, and Russian.

Wars create problems in the periodical field as well as in other fields. World War II prevented much free interchange of journals and created a backlog of unpublished material, some of which has only now begun to appear. Wars, depressions, and other conditions create another problem for periodical librarians. This problem has been allegorically described as: "One might liken periodicals to human beings: they are 'born;' they 'marry;' they 'die.' From time to time they may enter a state of suspended animation, coming to life again at a more propitious date. Occasionally, a periodical will reappear like a ghost from the half forgotten past." [1]

A short historical sketch of the early days of dentistry, its birth and growth, gives an interesting background to the development of dental periodical literature. Many centuries had to pass before it was developed, and many countries, especially those of Europe, had great and important rôles in its advancement.

Dental care is very old and its early recording goes back approximately as far as the year 5,000 B.C., when the *Legend of the Worm*, a Sumerian text, was inscribed in cuneiform writing on tablet, with advice for curing toothaches.[2] Toothache existed, and with many eras passed, is still existing, even though such remedies as that old Egyptian prescription[3] for mouthwash consisting of 1 part of water and 1 part of absinthe and similar prescriptions have been "curing" mankind for many centuries.

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

[1] Stechert-Hafner book news. 6: 103–104, (March) 1952.

[2] Prinz, Hermann. Dental chronology. Phila., Lea, 1945, p. 15.

[3] Gassen, N. M. Man's superstitions about toothache. Dental Outlook, 14: 150–152, April, 1927.

Several papyri, including the Edwin Smith Surgical Papyrus, the Ebers Papyrus, and several others during the Egyptian, Phoenician, Assyrian dynasties and clay tablets of the Etruscan and Persian Empires mention the existence of dental care in the early centuries before the Christian Era.[4] The Father of Medicine, Hippocrates, The Prince of Physicians, Claudius Galen, and other names well known to historians, mark the milestones of medical advancement.

In the Christian Era and the Middle Ages was recorded the foundation of several great medical schools, including that at Montpellier, France, the School at Salerno in Italy, and others. Great scientists and physicians like Guy de Chauliac and Leonardo da Vinci contributed their surgical and anatomical researches to medical and dental advancement. However, it was not until 1530 that the first specific dental book, the *Artzney Büchlein*, written in German, was issued by Michael Blum in Leipzig, Germany.[5] This is the first book dealing exclusively with dentistry written in a language other than Latin. France is next with Urbain Hemard's monograph published in 1582. In England the first work on dentistry, written by Charles C. Allen, in English, was published in 1685.

The orderly recording of dental knowledge began, however, without question in the "Cradle of Dentistry," as Lufkin calls France,[6] with the publishing in 1728 of Pierre Fauchard's epoch-making book *Le chirurgien dentiste, ou traitè des dents*. Dr. Weinberger has vividly described the period immediately following this event: "Between the time of Fauchard and John Hunter, a period of 50 years, there was published some of the most remarkable and finest dental literature that we possess. It was during this period that France assumed the leadership in dentistry which she retained until America, about 1840, began to make her bid for that position."

During this era some "books" appeared which contained courses of lectures, research papers, and some series of monographs which were recorded or published periodically. It seems to be hard to draw a line between these books of the earlier ages and modern periodicals because from a broad point of view these books could be called "periodical" publications.

Some of these early publications included William Rae's course of lectures which was assembled at Guy's Hospital presumably by one of his students, and was published in 1782.[7] In 1799, Joseph Fox began a course of lectures on the teeth, also at Guy's Hospital. The great French stomatologist, Emile Magitot published studies of tooth development and a chemical theory of the cause of

[4] Weinberger, B. W. An introduction to the history of dentistry. St. Louis, Mosby, 1948. 2v.

[5] Ibid.

[6] Lufkin, A. W. A history of dentistry. 2nd ed. Phila., Lea, 1948, p. 116.

[7] Trueman, W. H. History of Dental Periodicals of the British Empire from 1843 to 1924. In: Index of the Dental periodical literature . . . for . . . 1876–1885. Buffalo, Dental Index Bureau, 1925, p. xxiv–xlvii.

tooth decay as a *Treatise on dental caries* in 1867.[8] In Germany Otto Walkhoff was the editor for some 20 years of *German dentistry*, a series of monographs on scientific and clinical subjects.[9]

The 19th century showed great development in dental science all over the world. In Paris two American dentists began publishing *L'Art Dentaire* in 1857. In 1878 the Société Odontologique de France was founded and a year later the *Gazette Odontologique* was published, later becoming *La Revue Odontologique* now in its 74th year. The first dental school of France, L'Ecole Dentaire, was founded in 1879 in Paris. (Sudhoff gives the date as being 1879,[10] Lindsay as 1892,[11] Prinz as 1880.[12]) The first International Dental Congress was held in Paris in 1889. Dr. Edward Charles Godon of Paris was one of the leading spirits in the organization of the International Dental Federation in 1900, and one of the outstanding characters of the Federation. *L'Odontologie*, *L'Information Dentaire*, *La Revue de Stomatologie*, *Cahiers Odonto-stomatologique* are some of the French dental journals containing original articles.

If France is the "Cradle of Dentistry," England should be considered the cradle of European dental periodical literature. It was in England that the first dental periodical was published. In 1803, Joseph Fox[13] was one of a long line of teachers to give lectures on dentistry. He was followed by Thomas Bell and James Salter, thus creating the foundation of dental education in England a century behind France, according to the records of Dr. Godon in *L'Ecole Dentaire*.

The first European dental periodical was the *British Quarterly Journal of Dental Surgery* published in 1843, three years after *The American Journal of Dental Science*. After only two issues it suddenly ceased publication. The second, and also a short-lived periodical, was *The Forceps*, a journal of dental surgery and the collateral arts and sciences. James Robinson, the publisher and owner, was also editor of the *British Quarterly Journal of Dental Surgery*. *The Forceps*, a bi-weekly publication in small newspaper form, was a rather satirical and in many instances an offensively personal publication of which James Robinson himself said later: "I heartily wish I had never had anything to do with it." The first issue appeared in 1844, and it was discontinued early in 1845.[14]

The first successful British dental journal was the *British Journal of Dental Science*, which came into existence in July 1856, as the enterprise and property of Walter Blundell. This year was the year of the foundation of the first dental society of England, the Odontological Society of London. Samuel Cartwright

[8] Prinz, H., op. cit.
[9] Ibid., p. 113.
[10] Sudhoff, Karl. Geschichte der Zahnheilkunde. Leipzig, Barth, 1921, p. 186.
[11] Lindsay, L. A short history of dentistry. London, Bale, 1933, p. 69.
[12] Prinz, H., op. cit., p. 124.
[13] Lindsay, L., op. cit., p. 62–63.
[14] Trueman, W. H., op. cit., p. xxiv.

served as President, and the *British Journal of Dental Science* was established as the official organ for the Society's transactions. In 1857, *The Quarterly Journal of Dental Science* started publication, later becoming the *Dental Review*. The *Monthly Review of Dental Surgery*, which became the *Journal of the British Dental Association* and was the predecessor of the *British Dental Journal*, has long been one of the most important dental periodicals. The *Dental Record*, a monthly journal of dental science, art, and literature, began publication in August 1881, and reached its 72nd year in 1952. The *Dental Magazine and Oral Topics* contains original articles. The *Transactions of the Odontological Society of Great Britain*, continued in the *Proceedings of the Royal Society of Medicine*, contains valuable information.

Germany has contributed a great number of scientific publications to dental literature with such works as those of Walter Ryff, Pfaff, Purmann, Brunner, Serre, and other scientists. *Der Zahnarzt*, first appearing in 1846, was one of the earliest German dental periodicals. The editor says in his introduction to Vol. 1, 1846, "Whatever new is being done in Germany, France, England, Italy, Belgium, Scandinavia, North America, etc., in dental art and science, will be reported to the reader as soon as possible. . ." [15] In the November 1847 issue he writes, "Everybody, practicing a healing art, should consider it to be his duty to report the results of his experiences to his fellow scientists as long as they could be of no ill effect to others or to himself; if he does that, he means his art well."[16] The *Correspondenz Blatt für Zahnärzte*, *Centralblatt für Zahnheilkunde*, *Deutsche Monatsschrift für Zahnheilkunde* (formerly *Deutsche Vierteljahrsschrift für Zahnheilkunde*), *Deutsche Zahn-, Mund-, und Kieferheilkunde*, *Fortschritte der Orthodontik*, *Fortschritte der Zahnheilkunde*, *Stoma*, all contain original articles, reviews, and abstracts of current dental literature, and are important journals for dental librarians. *Quintessenz der Zahnärztlichen Literatur*, published since July 1950, is a small German "reader's digest" of dental literature containing abstracts and digests. The abstracts are grouped according to their special fields; sometimes they are several pages long with some illustrations. The pages are perforated, and if the reader wishes to keep the abstracts on "Prosthetics" separately, all he has to do is to remove the pages and put them in a binder furnished by the *Quintessenz*. In the back, it has a few short, practical hints for the profession. The *Deutsche Stomatologie*, beginning July 1951, carries only original articles with short summaries. The introduction to this journal is a mirror of Germany's greatest concern at present, the unification of its country, expressing the wish of having the Fatherland united and happy again. This periodical is definitely the product of an awakening nation, trying to rebuild and resume its place in scientific research.

Austria has its own dental literature. Of historical interest there is Georg von

[15] Zahnarzt, 1: 1–2, January, 1846.
[16] Ibid, 2: 329–334, November, 1847.

Carabelli's *Systematisches Handbuch der Zahnheilkunde* of which Vol. 1, 1831, contains a comprehensive presentation of dental history.[17] At present there are only three dental periodicals published in Austria: *Österreichische Zeitschrift für Stomatologie* beginning its publication as *Zeitschrift für Stomatologie* in 1903; *Österreichische Dentistenzeitschrift*; and *Dentalrevue*, an international journal of modern dentistry, containing reviews of articles published all over the world.

Belgium is a center of interest because of the great work of the Federation Dentaire Internationale, better known as the F. D. I. The new *international Dental Journal* is published primarily to acquaint international dentistry with the scientific advances reported at the congresses sponsored by the F. D. I. The scientific articles appear in English, French, German, Italian, and Spanish. Some of Belgium's periodicals are *Archives d'Orthodontie*, the digest of International orthodontical publications, and *Archives de Stomatologie*, official organ of the Société Scientifique de Stomatologie, representing the fusion of *Archives Wallonnes de Stomatologie*, and *Annales Belges de Stomatologie*.

The *Revue Belge de Stomatologie*, a monthly publication of the Belgian Association of Licentiates and University Dentists, merged with *Revue Belge de Science Dentaire* which suspended publication from Spring 1940–1946. *Le Journal Dentaire Belge* suspended publication from April 1, 1940, until September 10, 1944. These interruptions in publication show the devastating effect of war on scientific literature.

The Scandinavian countries have made a great and valuable contribution to periodical literature with some outstanding and extremely useful publications. For instance, Sweden's *Acta Odontologica*, with its principal object the presentation of Scandinavian odontology to a foreign audience, has articles appearing in English, German, and French. Supplements on research and experimental projects of great scientific value are issued with each volume. *Odontologisk Tidskrift* founded in 1893, and *Svensk Tandläkare-Tidskrift* are also published in Sweden. In Norway *Den Norske Tannlaegeforening Tidende* and *Munnpleien*, and in Denmark *Tandlaegebladet*, the Danish Dental Society's publication, contain original articles. In Finland the Finnish Dentists Association publishes *Finska Tandlâkarsâllskapets Fôrhandlingar* twice a year. *Nordisk Odontologiskt Archiv* is perhaps one of Finland's best known dental journals. Holland has a useful publication *Tidschrift voor Tandheelkunde* which includes an abstract section "Excerpta Odontologica" with twelve sections on various phases of dentistry.

Switzerland's popular publication *Schweizerische Monatsschrift für Zahnheilkunde*, formerly *Schweizerische Vierteljahrsschrift für Zahnheilkunde*, was founded in 1891. *Revue Trimestrielle Swisse d'Odontologie*, published by the Swiss Odontological Society, was a supplement of the latter.

[17] Prinz, H., op. cit., p. 91.

In the Latin countries Spain with Viscount Florestan de Case Aguilar played an important rôle in the organization of the dental profession and in the founding and editing of the dental journal *La Odontologia*. The journals *Revista Odontolgica* (later *Revista Odontologica*) and *Anales Españoles de Odontoestomatologia* contain surveys, original articles, and analyses of Spain's scientific research.

Italy's part in science is well known and some of the works of the old masters are still used as basic information in anatomical research. In 1872, the official organ of the Italian Odontological Society, *Giornale di Corrispondenza per Dentisti*, began publication. *L'Odontologia* appeared in 1877. *La Stomatologia* of Milan, *Revista di Odontoiatria e ortonatodonzia* of Bologna, *Odontoiatria e Protesi Dentaria* are only a few of Italy's dental periodicals.

South America has several important publications and has made a notable advancement in dentistry during the last fifty years. Argentina's Odontological Society publishes *Revista Odontologica* and the *Boletin de la Asociacion Odontologica Argentina*. In Brazil *Boletin Odontologico*, a quarterly publication of the Central Brazil Surgeon-Dentists Association, and *Revista Brazileira de Odontologica* are both popular periodicals.

Chile's *Revista Dental de Chile* and Colombia's *Temas Odontologicos*, are known dental publications. In Peru the Academia de Estomatologia del Perú publishes a *Boletin*. Two "Revista's" should be mentioned here: *Revista de la Asociation Odontologica del Perú* and *Revista de la Sociedad Peruana de Protesis Dental*.

Australia's College of Dentistry in Melbourne publishes the *Australian Journal of Dentistry*. *The Dental Science Journal of Australia* and the Australian edition of *Dental Summary* appear in Sydney. The *Dental Journal of Australia* is publishing its twenty-fourth volume in 1952.

Africa has some contributions, although less known than those of the other continents. *Revue Odonto-Stomatologique* is published in Algiers, and *International Dentistry* in Alexandria. *The Official Journal of the Dental Association of South Africa* contains original articles and abstracts of current literature, as does *South African Dental Journal*.

In Asia, Japan has, perhaps, the greatest number of dental periodicals. Several began publication around 1890. Some of the journals, such as *Odontology* of the Society of the Nippon Dental College in Tokyo, have articles in Japanese, French, and English. Several Japanese journals contain research articles, with summaries in English, French, and German, which are of great value.

China with its great cultural background was late in developing its dentistry. The first Dental College was established in 1918, in Chengtu. The best known Chinese publications are *China Dental Journal* published in Shanghai and *West China Dental Journal* published in Chengtu, with articles in English and Chinese.

At the present time it is a real problem for dental periodical librarians to

decide on the extent of coverage desired for dental periodical literature. The librarian must answer the following questions: How extensive a coverage is desired? Should the collection include periodicals primarily related to original research and case histories? What journals fall in these classifications?

To answer these questions now is quite difficult. Many but not all of the dental periodicals written in the English language are listed in Black's *Periodical Index to the Dental Literature*. The Surgeon General's *Index-Catalogue, Q. C. I. M.*, and the *Union List of Serials* cover dental periodicals written in English and foreign languages employing different classification systems and combining dental and medical literature. As a result, the selection of dental titles is a time-consuming task.

The Federation Dentaire Internationale (F. D. I.) published a list of American and foreign dental periodicals in 1939. In 1947, this list was revised and published in the *Documentation*, recording 180 foreign and 44 United States and Canadian publications.

At the present time there seems to be an urgent need for a modern and reasonably complete compilation of foreign dental periodicals. The difficulty of the task will require the co-operation of all interested individual librarians and the co-operation of and perhaps financial assistance of organizations in this field. The resulting service to dentistry should justify the co-operation and help of professional dental organizations. The author would welcome correspondence on this subject.

Delivery Service by the Library*

By Audrey L. Kargus

Librarian, St. Louis Medical Society
St. Louis, Mo.

ALTHOUGH many problems may seem to be more pressing, one which keeps popping up again and again is "delivery service by the library." Since the Society Library is primarily devoted to giving service to its members, this is one that is a great time saver for our patrons.

By "delivery service" I mean a method in which arrangements are made to pick-up or deliver material to our members, either immediately (prompt) or within a reasonable length of time (deferred). There is no standard method which we can use to solve this problem. Each of us has circumstances or conditions which alter the situation. Permit me to tell you what my Library has done to find an answer.

This question had been considered by our Library Committee many times, but not until 1947 had any progress been made. At that time a thorough investigation of its possibilities was made. Certain items had to be taken into consideration: budget, location of the Library, type of help available, type of material sent, and distance to cover for deliveries. Our Library services the city of St. Louis and has a membership of 1350. There are two medical school libraries within a mile of our building. We are located in the central part of the city, and within a five block radius there are six large medical office buildings. One of our major problems is inadequate parking space. Our budget was such that the hiring of a full or part time messenger was out of the question.

A survey of the various types of delivery services already in operation by other libraries in our city gave us some idea of what was available. The following services were found:

1. Student help used to deliver or pick-up material by way of public service vehicles.

2. Parcel post. A deposit was made monthly by patrons interested in having material mailed to them.

3. Yearly contract with a private delivery company with regular routes through the city. This service was operated at a loss to the Library even though an extra charge of $3.00 a year was made.

4. A bonded messenger service with a charge for each individual delivery which was paid by the member requesting the service.

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

It was finally decided that the bonded messenger service would be used by the Library. It is operated on a zone system, and the price scale set according to the weight, as well as prompt or deferred type of service required. After a year charges became so expensive that interest lagged. Last year the same question again arose. At this time we noticed that several of our members had successfully used their regularly patronized drug stores. We solicited the large stores in St. Louis which operated their own vehicles for delivery of prescriptions. They offered us, without cost, pick-up and delivery of books on their regular prescription routes.

Whenever possible we try to rotate the eleven drug stores, but we give preference to the one which the doctor uses regularly. If the material is valuable, we ask that the messenger have the receiver sign for it. The following notation is placed on the cover of each package, "This package is being delivered through the courtesy of ..... Drug Co."

We have had to set down a few rules:

1. All requests must be made through the Library. The Library is not responsible for material lost if the request is made directly with the drug store.
2. Material must be wrapped and labelled with complete address.
3. Only material which can easily be replaced will be sent.

If the request is made early enough in the day, the material is picked-up and delivered by that afternoon. We have had only one incident of a book being lost by a drug store. This was caused by the member not complying with our rules. The service has been in operation for six months. We have used it for 73 deliveries, which means an average of one request per month for each of our eleven operating drug stores.

Publicity for the Medical Society Library*

By Wesley Draper

Librarian, King's County Medical Society
Brooklyn, N. Y.

ALL libraries should be well known to their clientele, and the kind of publicity required varies according to the type and needs of the individual library. Some libraries already may be so well advertised that they need no further publicity, but that certainly does not apply to the Library of the Medical Society of the County of Kings in New York. What I have to say in these few remarks applies to this Library; not only is it the library with which I am most familiar, but I believe our problems are much the same as those found in similar libraries.

Broadly speaking, the Library has three classes of potential users: the general public; students, interns, residents, and research workers; and practicing physicians, or the membership. The Library has no publicity problem with the first group. It is composed largely of those who wish to satisfy their curiosity, or to read up on medical literature to be certain that their physician has made a correct diagnosis and is giving the proper treatment for their condition. Some of them might be better off if they did not know the Library existed.

Publicity is necessary but not too much of a problem with the second class of users. Students have work assigned to them, and if the material is not available in their own library, they usually find one where it is. Interns and residents find much of their required reading in the hospital library, but consult a larger library for older or less common material. Research workers try various libraries and usually learn by trial and error where to find the type of publications required.

The biggest problem is how to make the Library and its contents better known to the Society membership, which is composed almost entirely of practicing physicians, a large part of whom are too busy with their practice to have a great deal of time for reading. Many receive the *Journal of the American Medical Association* and a few other periodicals in their special field of interest, some of which come to them as a result of Society membership. These few publications seem to supply all their reading requirements and keep them abreast of all they need to know about advances and new discoveries in medical research. It is this type of individual, especially, who should know more about

* Read at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

his library and the facilities available there. After all, he pays the bills, or part of them, and the time may come when he will have an unusual case to report and will want to know what has appeared in the literature.

The Library has used several means of publicity in the past. Under the very able management of my predecessor, Mr. Charles Frankenberger, the membership as a whole probably knew much more about the Library than it does today. Mr. Frankenberger inaugurated the Library Page in the Society's monthly *Bulletin* which lists recent accessions as books are added to the Library. These additions are kept on a shelf in the Reading Room as new books, until the next issue of the *Bulletin* appears, when they are shelved in their regular places in the stack room. Each June issue of the *Bulletin* has a selected list of books for summer reading, comprising recent additions in the fields of medical history, biography, and other interesting topics. The December issue lists new periodicals added during the year. A rather detailed annual report is issued each year.

Mr. Frankenberger also wrote various articles about the Library from time to time, which were published in periodicals having a large circulation among the membership. In addition, he gave an annual series of lectures on medical bibliography to students at the local medical school. These lectures were designed especially to make the Society Library better known to the students, a large number of whom later practice in Brooklyn and become members of the Society. These last two activities are no longer in effect. The local medical school has a much better library now, with a very efficient librarian, and manages very well without outside aid.

A recent survey on the use of the Library showed that about forty per cent of the Society membership borrowed material, at least once, over a three-year period. No figures are available on the number of others who used books in the Library, not taking any out for home use. It is too much to assume that the forty per cent knew the resources of their Society Library. And even if they did, what about the sixty per cent who probably never entered the Library during that time? Did they have no need for medical literature? Were their reading wants supplied by another library, or were they among those who wanted material and did not get it because they did not know that it was available?

Several incidents have occurred which show that the library resources are not as well known among the membership as they should be. During the war one of the members wrote to the "Library of Congress Check List of Foreign Periodicals of the War Years" to learn where he could obtain a certain volume of a German periodical. This member was referred back to his Society whose Library at that time possessed the only known copy in America. This member didn't realize that his Library might have the publication he wanted, or else he tried and failed to find it there. In either case, the Library was at fault and the satisfaction of having something unusual was overshadowed by the chagrin

that this member did not first think of his Library, or did not get there the material he wanted when he needed it.

It is not unusual to have some one call the Library to learn whether rather common material is available, and then hear the answer, "Oh, do you have that in the Library?" in a very surprised tone of voice. This situation may not be common to other libraries. It may be that it is a problem peculiar to Brooklyn. Brooklyn is a part of New York with a population larger than any other of the five boroughs; but just across the river stand the great skyscrapers of mighty Manhattan, which seem to possess some kind of magic magnetism, or unusual drawing power, so that many residents of New York City seem to think of Manhattan as having everything, and of Brooklyn as the place in which to get lost every time one crosses the East River.

Use of the Library has decreased somewhat in recent years. I do not know if this is common across the country, but I have heard of a few libraries having the same experience. Several reasons are given for this decrease. Some may apply only to Brooklyn; some may be excuses to cover up the Library's failure to provide the facilities which a modern up-to-date medical community has a right to expect from its Society Library. In recent years hospital libraries have been improved and enlarged; Veterans Administration libraries have been organized; parking space around the building has disappeared; library shelves have become overcrowded; and with the overcrowding has come decreased staff efficiency. These and many others may be contributing factors, but at the same time membership in the Society has increased, which should cause an increase in the use of the Library. It is better to fact the facts, admit that the Library has failed somewhere, and try to find a solution.

There are several possible methods of publicity, some of which the Library has tried. Orientation of new members includes a tour of the Library, when the member meets the Reading Room Assistants, learns something about the Library's catalogue, medical indexes, and resources. He is given a brochure to take with him which contains all pertinent information about the Library in a short, attractive form. Upon joining the Society each member is required to sign the Constitution and By-laws. The book for this purpose is kept on the library floor of the building and the tour of the Library is scheduled for the time he signs up as a member. In theory this works fine and sounds excellent. However, in practice the member usually has his car double parked in front of the building and dashes out to avoid a parking ticket.

Another method of advertising is to keep the Library before the members by the use of Library bulletin boards giving library announcements and placed to be seen by members attending various meetings held in other parts of the building. Paper jackets from newly acquired books often make excellent advertising material. Short articles or interesting facts about the Library may be

published from time to time in the Society's publication. A comparatively large and well chosen Library Committee from the Society membership, all convinced that their Library has everything or can get it, is a great help. A well-selected group has contact with a large part of the membership through various hospital connections, local Society meetings, or social events.

The library should provide as many services as space, income, and staff permit, such as, telephone service, reference work, photostats, and microfilms. Unfortunately, many libraries are unable to provide as many of these services as they would like.

Another method of advertising, which probably should be considered, is public relations. How do the library and staff appear to the reader? We are all familiar with advertising slogans such as: "Why we lost a customer. He died," or "A satisfied customer is our best advertisement." A satisfied customer is extremely important to the Society Medical Library. I have had a few rare privileges of learning directly or indirectly the reactions of readers who did not know I was connected in any way with the Library. Some of the remarks I heard were quite enlightening, and not too complimentary.

The average practicing physician is well educated in his field, is accustomed to make an exact and sure diagnosis in a comparatively short time. Usually he is a rugged individualist and always extremely busy. In his practice he probably has an assistant nurse to aid him and hand him the instruments he needs. When he comes to the library, he may be independent and find everything he needs without any assistance whatever, or he may be completely helpless. It may even be necessary to open the book and say, "Here, doctor, read this." To handle several of the helpless types at once, with an inadequate staff, requires ingenuity, the wisdom of Solomon, and the patience of Job. Most librarians lack one or more of these qualifications, but a few simple rules will go a long way toward improving reader relationship:

1) Never be too busy to aid any reader who may need help. His problem is more important than anything else in the library.

2) Don't engage him in lengthy unnecessary conversation. He may be overdue at the hospital for an important or special delivery.

3) If stuck, don't appear dumb, but try to obtain from the reader more information on various phases of the subject; it may dig up a lead. Don't try to substitute something else. I have heard of an oil burner repair man who was called in for an emergency. The house was cold, and while he spent an unusually long time trying to get the heat up, his assistant went to the living room, where the family was standing around shivering, and tinkered with the thermostat. In the process he kept a finger on the bulb of the thermometer, and in a short time had the family warm without heat. The average physician cannot be fooled; at least he usually knows what he does not want.

4) Have library staff cooperation.

5) Assume a pleasing, friendly attitude toward the reader.

6) See that there is a thorough knowledge by each staff member of the subject field of medical literature and the library's resources.

The Medical Society Library holds a unique place in the life of the community, and anything that can be done to make it better known is worth trying. It is sometimes exceedingly difficult to evaluate results, as months or even years may elapse without any noticeable change, but the library which keeps at it continually will eventually be rewarded for its efforts.

Tips to Interviewers*

By J. P. Shanley

Personnel Officer, Veterans Administration Hospital, Sunmount, N. Y.

My TOPIC tonight is "Tips to Interviewers." I. I think a good tip is "Be Prepared." If you have certain qualifications which must be met in order to obtain the job, have these qualifications available or firmly set in your mind. Have a room available in which to conduct the interview, or if that isn't possible, have some place to talk to the applicant where you won't be disturbed. I don't think anything bothers me more than to arrange an interview with a supervisor and have the supervisor act as if he were much too busy to talk to the applicant; only because I was so unthoughtful as to bother him, would he condescend to give the applicant the time of day. Here's a person with whom the supervisor must work and live for a good share of each day, a person who will help operate his activity successfully, who may be required to assume the supervisor's responsibilities from time to time—and he can't spend a few minutes in preparing for the interview.

II. How to conduct the interview. I get the best results by letting or getting the applicant to talk as much as possible. I don't mean to infer that there isn't certain information that you must get over to the applicant—but, remember, just as the applicant must find out all he can in order to make a good decision, so the better decision you can make the more information you can get from the applicant. In addition to what appears on the application, try to find out why he wants to work in your library, why he wants to live in your community, what his plans are for the future. As Dr. Temple Burling, Professor, New York State School of Industrial & Labor Relations, Cornell University, has so aptly put it, "You can't hire a hand." You are hiring his ambitions, his problems, as well as his knowledge and skill; the more you know of this man, the better able you are to decide if your library is the place for him.

In my own experience I'm more apt to decide upon an applicant who says, "I'm sick of living in the city with all the crowding, confusion, and commotion. I think I'd rather bring up my family here where they can get out in the open, really enjoy life, and I think I would like to work in your hospital because I feel that my efforts will really be helping someone." I'm more apt to decide upon him, even though his experience and training may not be as good as some others.

Three other tips I might mention about conducting the interview. I try always

* Condensed from a talk given at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

to have the applicant fill out an application before I interview him because I find it much easier to talk to an applicant if I have the information before me. I always tell an applicant that a decision will be made at some future time, either the next day or the next week, depending on circumstances. This keeps me from being snowballed into making a hasty decision (something I have lived to regret many times), and assures both the applicant and me that the decision will be arrived at after careful consideration of all the information available. I try not to emphasize promotional opportunities too much. I have often had the experience of hiring an employee, only to have him leave shortly after. There wasn't anything particularly wrong with the job he had, but I have found that the applicant hadn't actually accepted the job we had offered, but rather a job that he hoped to get soon after his employment.

III. Arrange additional interviews. Arrange as many interviews as is logically possible with other interested people. This includes arranging interviews with your supervisor and some other employees who work under your supervision. I think this is very important; it gives you the benefit of other opinions as well as giving other people involved a chance to express their preference and to give them a share in the responsibility of selection. Both your supervisor and those who work under your supervision are vitally interested in whom you hire and in most instances appreciate an opportunity to be in on the selection.

Now, after these interviews have been completed and the applicant has been told he will be notified at some later date, check with the other people who have talked to the applicant and also check with the Personnel Office. In our hospital virtually all applicants are interviewed by someone in Personnel and if requested we are always glad to help in the final selection. After getting everyone's opinion, make your selection and be sure it's your selection and not made by someone else. If you are the person who is responsible for conducting the interview and arranging for the other interviews, then you are the one to make the final selection. Never mind what the Personnel Office tells you or anyone else; pick the one you think will work out best. You are the one who will work with him, train him, and the one who is responsible for his performance; so you select him too. In the Veterans Administration it is my responsibility as Personnel Officer to pass on an applicant's qualifications and to assist the supervisor in arriving at a decision. It is the supervisor and no one else who makes the final selection.

IV. Lastly, be sure to admit it if you have made a mistake and then do something about it. I have been interviewing prospective applicants for eight years and I still make bad mistakes. There just isn't any secret or any special technique which is foolproof, and no matter how much practice you've had, mistakes will always be made when you're dealing with people. Try to do something about these mistakes. Sit down and talk the problem out if you find you've made the wrong choice. There is nothing much sadder than to see a supervisor and his employee work together day after day without at least a somewhat happy relationship.

Labor Saving Devices and Techniques of the Future*

I. Introduction

By Mollie Sittner

Librarian, White Memorial Medical Library

Los Angeles, Calif.

THIS age has been called the mechanized age, a world full of electric waves, atoms, and electronics which when properly combined, act as our servants. One can say with certainty that the labor saving devices of the future in the library world are definitely tied up in some way with the mechanization of many library tasks, particularly those which are repetitive and routine. Technology is devising more means of mechanical communication than ever before, yet in most libraries the most complicated mechanical tool used for this purpose is the typewriter, which permits information to be swiftly recorded. A few larger libraries have some type of duplicating machinery, but beyond that few have made use of machines for information recording and dispensing. It is somewhat of a reflection upon our set-up that our swiftest and most analytical tools are devoted chiefly to secondary ends, such as business and statistics.

A machine of itself has no place in a library. But most of us recognize that machines are better than brains when they are handling operations which have to be repeated many times rapidly. Someone has said that the word "electronic" is not magical enough to turn a machine into a human being. So librarians need not fear mechanizations because even the most advanced machines show little sign of equaling the analytical capacities of the human brain. Neither should they fear machines simply because they do not understand them and their operations; many of us do not understand the mechanics of our car, yet we keep on driving it. Edison once explained electricity to an Englishman: "If you had a greyhound, elongated so that his head was in London and his tail in Lisbon, and you'd pull his tail, he'd bark in London. What goes through him is electricity." Simple to see, even if we do not understand how it works. The installation of mechanical labor-saving devices should be encouraged, if the labor and time saved is converted into more and better services.

Take a look with me into the future and see if you will not agree that the evidence seems clear that librarians in the future will be doing clerical routines

* Panel discussion held at the 51st Annual Meeting, Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

photographically instead of pounding the typewriter on repetitive operations. If an electric or photocharger saves three to five man hours a week, then it is time we considered it a real labor-saving device. There is reason to believe that the Photo-clerk will be a real time saver. The Photo-clerk is at present in the experimental stage, but experimentation for the last three years in the Department of Agriculture Library under the guidance of Dr. Ralph Shaw has shown that this new technique offers great possibilities for simplification of library routines, and through reduction of the amount of time which must be spent on such routines as follow-up book orders, overdues, missing issues of periodicals, and other clerical duties. Even at this early experimental stage the machine has proved that these routines can be done faster and more accurately than by hand, especially so when the work must be done on a large scale.

Mechanical recording of information is superior to non-mechanical because it is faster and permits rapid duplication. Mechanical searching, particularly by means of the Rapid Selector, is likewise superior in speed and accuracy to that ordinarily employed. The Rapid Selector has been named an "Electronic Brain." Dr. Shaw states that this machine requires further modification before it will become a much used tool, but that even in its present stage it is still the fastest to give release of information. The only thing the machine does is to store and reproduce data in accordance with whatever instructions are stored or called for by the human mind. It is a device which operates by a combination of electronics and photography to search coded items on film at the rate of more than 60,000 subjects a minute. Estimates have been made indicating that it would take the Rapid Selector only about 15 minutes to review all entries which have appeared in the last 30 years of the *Chemical Abstracts*. With the perfection of this and similar machines, I am sure the librarians of the future will be using high speed and compact filing, storing, and reproducing devices for long bibliographic searches. It is of particular importance to those libraries having a vast amount of material or information which requires compact storage and yet must be made available promptly.

If machines have been built to count, calculate, and play chess, why not a machine to translate one language into another? Scientists have been pondering this possibility, and engineering laboratories are at work to perfect such a machine. The simplest of these machines in process is based on the storage or memory apparatus in a mathematical machine. Not only is it a machine which translates, but it will pass the translations on to the electric typewriters. The translation will be, perhaps, very literal and artificial, but the scientists concerned assure us that scientific articles could be translated clearly enough to know what the original is about. No one will argue the labor-hours saved if such a machine were available in medical libraries today. It would be a pleasure to use the foreign journals which at times present a real problem.

Of the many scientific triumphs which electrical engineers have performed, there is none of greater interest to librarians than the recently perfected high-speed, long distance facsimile system developed by R. C. A. at the Oak Ridge National Laboratory. The new system incorporates several innovations in the field of facsimile reproduction. The reader transmitter will scan printed copy on flat surfaces such as book pages and will make a direct enlargement of materials in small type by ratio of four to one. The signal is transmitted over an ordinary telephone line and the recorder will produce clear, highly legible black on white copy at an unbelievable speed. In actual tests at Oak Ridge, articles from periodicals at the central library were received at the outlying laboratory within four minutes. Librarians would greatly benefit if some adaptation of this system could be set up in certain sections or areas. I can visualize how time and effort could be saved in doing interlibrary loans, and money saved by making it unnecessary to duplicate rare and expensive materials. Problems of distance to storage centers would disappear, as would distance to any part of the United States, if such a network were established.

Perhaps in the future each one of us will carry with us a small pocket instrument to which we will talk when necessary, either storing information in it or receiving information from it. A brain with a motor may guide and advise us in the world of the future, but whatever comes out of the machine will first have to be put into it by a human being. Librarians will never be replaced by machines but simply freed from the drudgery of library routines for the more vital and intellectual side of librarianship. Dr. Ridenour has so aptly expressed this idea: "Some one must still devise the key symbols and phrases which determine the success or failure of the electronic cataloger. The word, ELECTRONIC, is not magical enough to turn a machine into a human being."

BIBLIOGRAPHY

BERKELEY, E. C. Giant Brains; or, Machines that think. N. Y., Wiley, 1949.

BRISTOL, R. P. Can Analysis of Information be Mechanized? College & Research Lib. 13: 131–135, April, 1952.

BUSH, VANNEVAR. As We May Think. Atlantic Monthly 176: 101–08, July, 1945.

HARDKOPF, J. C. Cybernetics and the Library. Library J. 76: 999–1001, June 15, 1951.

KAISER, W. H. Television and Reading. Library J. 76: 348–50, Feb. 15, 1951.

KAISER, W. H. No-slip Library Machines. Sci. News Letter 56: 295, Nov. 5, 1949.

OSBORN, A. D. "Arrearages"—Ugly Word. Library J. 76: 1863–1867, Nov. 15, 1951.

SPRING, ELIZABETH. S.L.A. New York Chapter looks at Mechanical Aids. Library J. 75: 722–24, April 15, 1950.

SHAW, R. L. Machines and the Bibliographical Problems of the Twentieth Century. Washington, D. C., March 15, 1951. (Reprint)

SHAW, R. L. Management, Machines and the Bibliographic Problems of the Twentieth Century. Washington, D. C., March 15, 1951. (Reprint)

SHAW, R. L. Will the Machines Take Over? Library J. 78: 1085–87, July, 1951.

SUNDERLIN, C. E. Future of Science Libraries. BULLETIN 40: 147–152, April, 1952.

II. Notched Cards

By Louise Darling

Librarian, Biomedical Library, University of California

Los Angeles, Calif.

During the last few years a fairly voluminous literature has developed on the punched card and its use in industry, hospitals, libraries, and what-have-you. The 506-paged Casey and Perry book on punched cards[2] appeared at the turn of the year and this spring both Ralph Parker's *Library Applications of Punched Cards*[6] and McGaw's *Marginal Punched Cards in College and Research Libraries*.[4] In any issue you may scan of *American Documentation* or *The Journal of Documentation*, and now and again in the more generalized periodicals in library science, you will find appearing discussions and new information concerning the punched card; yet the card itself seems to be a stranger in the majority of medical libraries. This is probably due in part, at least, to the fact that *punched card* is a term used indiscriminately for the Hollerith or any other card which is machine actuating, as well as for the type which is manually sorted. In our awe of the fancy electric and electronic devices used with the machine-sorted card, we tend to pass over the many practical applications the hand and needle sorted card has in the smaller libraries, whether a one-man hospital library of five thousand volumes or so, or a medical school library of a hundred thousand volumes.

The manually sorted card should properly be designated as a keysort card, marginal punched card, or better yet, marginal notched card in contra-distinction to the machine sorted punched card. Most marginal notched cards, e.g. the McBee Keysort[3] or the Hadley Standard Library Analysis card,[7] have holes along the edge of one or more sides of the card, each hole being designated by a number or letter or both. The letters or numbers are components of the code and the holes above them are notched with a hand punch in accordance with the code worked out for the particular operation involved. There is another type of card, the Zator, which has one hole in the center bottom of the card, but no holes above the code components; this also utilizes a different principle in formulation of codes. However, the Zator card may be applied to many of the same types of operation as other marginal notched cards. It is used with a special sorting box equipped with an electric vibrator, then sorted by needle as are the others, the notches being the factors which determine which cards will fall from the file.

Notched cards have been used in libraries with great success for circulation records, serial records, and bibliographies. Examples will follow, but, first, even for the relatively simple operations for which notched cards and sorting needles are used, heed should be given to the cautions of Ralph Shaw, of Rapid

Selector fame, in his Windsor Lecture of 1951.[1] A completely clear definition should be made of what is wanted by the record. For any new operation, the conveniences offered by the various makes of cards should be thoroughly investigated at this point. The decision may be to try out one of the stock cards or have a special one designed by the manufacturer selected. Then the definition must be translated into a code which will accurately and effectively indicate what is required. The volume of material to be handled must be considered. Perhaps there is too little material to make the effort of setting up the cards worth the expense in time, or there may be too much to be handled practically except by machine sorting. And there is always the possibility that the careful analysis needed to determine what is wanted and how to express it in code will happily result in showing that the record isn't really essential at all in any form.

The widest library use of notched cards at the present time is probably for circulation records. Their great advantage is that whether they are used for the book card or as a call slip, they do away with any necessity for a double circulation record, for the card is filed by call number and punched for date due. (If journals are not classified they may be filed in back of the books by title or entry.) It may also be punched to indicate status of borrower, location of materials in special places in the library, and materials at the bindery. This makes it possible to give the borrower immediate information about any book which is not in the place assigned it on the public catalog card, at least if there is a legitimate reason for its not being there. If the library is one in which the call slip system is used, a very appreciable saving in time is effected by use of the notched card because it eliminates the need for equipping each book with book card and pocket. To be sure, there are inaccuracies made in filling out the call slip which now serves as the sole record of the loaning transaction, but, in actual practice, this has proved a very minor problem even in libraries with a circulation averaging 200 to 300 a day or more.

Notched cards are also valuable for want lists, exchange records, and binding records. Serial records adapt themselves particularly well to this type of treatment. Cards may be coded for broad subject classification, vendor, source (i.e. through subscription, gift, or exchange), language, country of publication, etc., and for alphabetical arrangement. The latter makes it possible to rearrange the cards rapidly after sorting for any of the other kinds of information for which the cards are coded.

The most interesting application of the notched card, and certainly the most talked about, is in bibliography. The bibliographical reference may be typed on the card; or a full abstract, or, again, an entire article in microprint may be used. The card may be coded for language, for alphabeting by author, for date of publication, for journal title if an article, in fact for almost anything that might be needed by the researchers for whom the bibliography is being made. The subject may be subdivided by special aspects which may, in turn,

be broken down still further. For example, a bibliography on *radioactive isotopes* might be coded to indicate the use of isotopes as tracers in biology and medicine, their chemical composition, their use in dermatology and other medical specialties, their application as therapeutic agents in cancer treatment, and a host of other subdivisions. The subdivision tracers might be divided to indicate use in diagnosis of disease or in plant, animal, and human physiological investigations, and so on. A bibliography on *blood groups* might be subdivided by name of type, structure of each group, distribution by place or nationality, methods of determination, etc. The enormous new literature on ACTH might be coded to bring out ten, twenty, or more aspects of particular interest to the clientele of the library making the bibliography. Thus, by using the simple device of a notched card, one bibliography can be made not only to serve several purposes and for many people, but also to save a great amount of time for the library. If possible, some type of inexpensive photographic or other duplicating equipment should be available to use to obtain a copy of the sorted cards for the researcher.

It is in subject bibliography that the type of notched card used requires particularly careful consideration, for if a large number of concepts are to be indicated on a single card, the card must be able to accommodate them; that is, it must provide sufficient space on which a relatively uncomplicated code can accurately indicate a maximum number of single concepts or kinds of information about the subject in hand. The Zator card with its code based on the principle of random patterns as opposed to fixed patterns is especially efficient in this respect.[5] However, at the present time, most of us who work in medical libraries are unlikely to undertake bringing out more than a very limited number of facets for any given bibliography. The essential point is to work out a simple, effective code, then to index the code on a card or two at the front of the bibliography file, and, third, set to work compiling. On our campus are three sets of the Electron Microscope Bibliography put out by R. C. A. All were purchased some two years ago; but not one is in use yet, because no one has had time to work up all the aspects to be coded. It appears to be quite possible to become a slave to the card as well as to the machine. Still the notched card can be a wonderful boon to the overworked librarian. Give it a trial if you have not already done so.

REFERENCES

1. Bibliography in an age of science. Urbana. University of Illinois Press, 1951. (Second Annual Windsor Lectures) Contents: Ridenour, Louis N. Bibliography in an age of science, p. 5–36. Shaw, Ralph R. Machines and the bibliographical problems of the twentieth century, p. 37–72. Hill, Albert G. Storage, processing and communication of information, p. 73–90.
2. Casey, Robert S. and Perry, J. W. Punched cards, their application to science and industry. New York, Reinhold Publishing Co., 1951. 506 p.

3. McBee Company. McBee Keysort punching and sorting manual. New York, 1950. 19 p.
4. McGaw, Howard. Marginal punched cards in college and research libraries. Washington, D. C., Scarecrow Press, 1952. 218 p.
5. Mooers, Calvin N. Zatocoding applied to mechanical organization of knowledge. American Documentation, v. 2, no. 1., p. 20–32. Winter (January) 1951.
6. Parker, Ralph H. Library applications of punched cards: a description of mechanical systems. Chicago, American Library Association, 1952. 80 p.
7. Putnam, Marguerite E. The "Universal" marginal punched library card. Los Angeles, Charles R. Hadley Co. [1951?] 12 p. Processed.

III. Book Storage

By Suzanne C. Fallot

Librarian, Los Angeles County Medical Society
Los Angeles, Calif.

The rapid growth of libraries, especially research libraries, and the present cost of building have obliged librarians to give added consideration to the question of book storage, for despite microfilms and microcards, there will always be books to house and preserve.

In 1949, Mr. Fremont Rider, Librarian of the Wesleyan University, wrote an interesting book entitled *Compact Book Storage*. This book offers suggestions for storing less-used research materials by making better use of existing shelf space in any library, without "any structural building change and without any other expense that could not easily be met out of current library income."

The first of these suggestions is "sizing," that is, arranging all books on the shelves by order of size. Mr. Rider points out that a shelf may have on it 20 books 7 inches high and a single book 12 inches high, in which case the width space and the height space are not governed by the smaller books, but by the one large book. This means that probably three-fourths of the cubic space occupied by that particular shelf and its contents are vacant air. If the same situation exists on many shelves, the result is really an astonishing waste of space.

The second suggestion is shelving books with the bottom short edge, instead of the long edge, presented to the aisle. This would reduce the space occupied by each book, since most books are made to a ratio of width to length. By such a method of shelving, the bottom edge must show the necessary identification markings. For a good number of books with a smooth bottom edge, india ink and pen are satisfactory marking tools. For books which have a soiled, uneven, or uncut bottom edge, it may be necessary to shave off a thin strip of it in order to obtain a surface suitable for writing. Materials which for one

reason or another cannot be marked satisfactorily on the bottom edge may be stored in boxes of various heights corresponding to heights of turned down books, each height coming in various widths.

Boxes would be especially suitable for materials such as unbound materials of no great value not likely to increase in a great measure; separate pieces relating to the same subject, but coming in different forms; books with poor covers, but not valuable enough to be rebound; fragile books; all kinds of pieces, memorabilia, etc., which should be preserved. The boxes would be shelved with one of their short ends presented to the aisle. They would be labelled and their contents cataloged. As regards cataloging, a distinction of less-used research materials in compact storage can be made by simply prefixing the classification symbols on the catalogue cards and on the box by a single arabic numeral denoting size.

The total cost of transfer to compact storage of less-used research materials was, at the Wesleyan Library, thirteen to fourteen cents per volume, including the cost of the new shelves placed in the stacks as a result of vertical space saving. Mr. Rider states that once this initial cost is recovered, storage will be about nine cents per volume as compared with their previous cost of fifteen cents per volume in conventional storage method.

What can be accomplished by compact storage is illustrated, in Mr. Rider's book, by two pictures: one before, the other after, of a long government set. In the conventional form of book storage, it occupied three and one-third tiers; in compact storage, one and three-fourths tier. Mr. Rider states, "According to our Wesleyan experience we have, by the combination of 'sizing' and 'turning,' succeeded in increasing the capacity of our existing stacks by nearly 60 per cent."

Although devised for a university library, compact book storage of less used research materials may offer libraries, large and small, some elements of remedy to an overcrowded state of shelves of active materials. By Mr. Rider's method, these materials would remain in the library, available when needed, instead of being deposited in a store room located, perhaps, at some distance from the library. In this sense, compact book storage could be called a time and a labor-saving method.

In closing, I would like to quote from the 1951 annual report of the College of Physicians' Library in Philadelphia, published in its *Transactions and Studies* of April 1952, in which Mr. E. H. Morse makes the following statement: "The day of the electronic library may be closer than we imagine. Facsimile transmission by television, and automatically reproduced punch card bibliographies may, and probably will, become common library practice within the next generation, but until they, and other devices, such as microscopy, have further proved their value and adaptability to a research library with our particular obligations, it would be folly to deny our responsibility to house our

present collections and provide for reasonable growth. We are inclined to think, putting it in homely terms, that the library runs less risk of losing its pants if it keeps its shirt on." I agree with Mr. Morse.

IV. Summary

By Mrs. R. Jobe

Librarian, Institute of Nervous Diseases

Los Angeles, Calif.

By way of summary the members of the Panel would like to suggest the following points. The further development of labor-saving devices and techniques will be directly proportional to the amount of thought expended. Theoretically, recent technological advances now make possible the construction of a machine to perform any specified task; therefore, the primary essential is to know basic requirements, what we are trying to accomplish, where, how, and for whom. After we have settled upon our objectives, the next step is to keep as informed as possible on recent technological developments and their uses. Then and only then will we be in a position to make the most efficient use of the labor-saving techniques.

Leonardo da Vinci (1452–1519)

By Karl Amadeus Baer

Assistant Chief Librarian, Veterans Administration
Medical and General Reference Library
Washington, D. C.

"TRY TO preserve your health—and the best way to do this is to keep as far away from any physician as you can." Leonardo's dim view of his medical contemporaries was shared by such men as Chaucer, Petrarch, Rabelais, and Erasmus. The progressive ankylosis of medieval guild consciousness, together with the authoritarian dictatorship of a distorted Galen and a misunderstood Pliny, had immobilized the physicians. It fell to the artists, the only free spirits of that day, to unfetter science in general as well as medicine in particular. It is difficult, if not impossible, to credit each individual properly with his own specific contribution in this rebirth of scientific thought. There is no doubt, however, that Leonardo's share has been grossly underestimated owing to the fact that his work in this field is scattered in a great number of unsystematic notebooks, which remained largely unprinted for several centuries. Not only did the late 15th and early 16th centuries have other means effective in the diffusion of ideas besides the printed page, but there is no doubt that "mind has always bespoken mind even before the invention of the printing press." (Klebs)

The ideas forever pressing upon and fermenting in the restless mind of this "uomo universale" (Burckhardt) were infinite in scope and number. "He was an engineer, a mathematician, a machinist, a chemist, an anatomist, a physiologist, an artist, a philosopher, and he excelled in all." (R. Knox) Il Anonimo, his first biographer, reports that it was his virtuosity in playing and improvising on the lute which secured for him a place at the court of Lodovico Sforza (il Moro) at Milan. There, and later at Florence, where he resided at the Ospedale S. Maria Nuova, he dissected some 30 cadavers of men and women of every age, more than any man before him. This wealth of material, together with animal specimens, offered him new insights into what Goethe calls "the chaos of single phenomena." He was the first correctly to describe the moderator band, the auricles and the coronary vessels of the heart, *instrumento mirabile invenzionato dal Sommo Maestro.* He found the frontal and maxillary sinuses and used modern injection methods to study the cerebral ventricles. To his interest in embryology we owe the first correct drawing of the *fetus in utero.* Turning to old age, he demonstrated the gross pathology of arteriosclerosis in a centenarian.

His conviction that the study of an organ could not be separated from that of its function led him to the proper evaluation of the sternocleidomastoid muscle in producing the human voice and to the brilliant demonstration of the physiology of the eye by means of one of his own inventions, the *camera obscura*. Even more important than the discovery of numbers of isolated facts was Leonardo's scientific method. To him Nature was the tribunal of highest instance. "Whoever argues and calls upon authority, is not using his intelligence, but his memory." Thus, he established anatomical drawing as a scientific pursuit so as to "make others see what I see;" at the same time, his artistic perfection was such as to be unexcelled to this very day. Injections of solidifying material were first successfully used by him for the purpose of reproducing the exact form of body cavities. For the study of the eye he suggested its immersion in egg white and sectioning of the coagulated mass of the eye in one block preempting by centuries the modern microscopical technique of imbedding. His eagerness to understand man, *la prima bestia infralli animali*, led him to the inauguration of comparative anatomy and morphology.

This genius who spent his last years in splendid isolation in a little chateau near Amboise as an adviser to François I. of France, was so far ahead of his times that he could not escape the suspicion of being a misanthrope and a snob. We find sufficient evidence to the contrary and to the fact that his moral standards were worthy of his scientific and artistic achievements in his short statement on dissection:

"And thou, O man, who learnest to know the marvels of nature through my work—if you believe it is a crime to dissect the human body, then stop to meditate, how much more criminal it is to take a man's life; and if this his outer form appears to you a wonderful structure, then remember that it is like nothing when compared to the soul living therein; for this soul whatever it may be belongs to God. Therefore, let it dwell in His work according to His will and pleasure and never permit your ire or malice to destroy such a life. For it is everlastingly true that whoever does not respect life is unworthy of possessing it." (*Anatomia*, Fogli A. Folio 2 recto)

Man; the Common Interest of History and Medicine

By Dorothy O. Johansen

Associate Professor of History
Reed College, Portland, Oregon

ALTHOUGH the Doctor is popularly thought to "know all," there are some things which he can learn from a historian; and it is as a historian that I wish to discuss them. I believe there may be some area in which our two professions could come together for mutual enlightment—where we might meet, for instance, stripped of our professional jargons, pomposities, and special exclusiveness, and rediscover a commonalty of interest. I say "rediscover" and I mean this, because there may have been a common origin for both of us. It is not improbable that in the first framing of a social structure, the tribal medicine man was not only the interpreter of individual and social ills as manifestations of the whimsicalities of the gods, but was the keeper of the tribal memory as well. Then in some early dawn of specialized functions, the medicine man became priest, and the poet and epic singer became the guardian of a people's memories.

But moving down into the era of recorded history and out of the area of supposition, we find both our professions taking a defined form during one brilliant age. You look back to the Hippocratic school as the founder of modern medical practice; so, too, my profession looks back to its founder who was contemporary with, if not a member of, that same school. You are all probably familiar with at least a fragment of Thucydides' *History of the Peloponnesian War* in which he described the plague in Athens in 430 B.C. It is a classic of its kind. It is a clinical report illustrating how the careful observer recorded the symptoms and progress of a dread disease with a cold and objective eye. And its presentation, one might say its methodology, is almost identical with the famous case histories which the *Schola Hippocratica* made famous. But if Thucydides learned this technique from the School, he also learned something else there. This was a naturalistic approach to causation. The School found its explanation of human ills in natural causes, not in the miraculous or divine; so, too, Thucydides, in examining the causes of a society's ills, found them rooted in human nature and not in the vengeance of the gods.

In this same history I have referred to, Thucydides describes a malignancy of the tissues of his society, which he called a revolution of class against class,

a war of city against city, of Spartans against Athenians. He began his work with these words:

> Thucydides, an Athenian, wrote the history of the war in which the Peloponesians and the Athenians fought against one another. He began to write when they first took up arms, believing that it would be great and memorable above any previous war.

Here is implicit the clinical attitude: this is a situation which will develop; it is well to observe it and trace its course. And Thucydides was aware of the need for accurate observation and for substantiating evidence in this case study. To this end he says:

> Of the events of the war I have not ventured to speak from any chance information, nor according to any notion of my own; I have described nothing but what I either saw myself, or learned from others of whom I made the most careful and particular enquiry. The task was a laborious one, because eye-witnesses in the occurrences gave different accounts of them, as they remembered or were interested in the actions of one side or the other. And very likely the strictly historical character of my narrative may be disappointing to the ear. But if he who desires to have before his eyes a true picture of the events which have happened, and of *the like events which may be expected to happen hereafter in the order of human things,* [italics supplied] shall pronounce what I have written to be useful, then I shall be satisfied. My history is an everlasting possession, not a prize composition which is heard and forgotten.

Thereupon follows a careful analysis of the factors and elements engaged in the war: of men's lust for power, their ambitions, their fears and insecurities, of their semantic vulnerability, of their institutional strength and weaknesses. And you will note that Thucydides sets up human nature as the consistent factor of continuity in the historical framework. "As long as human nature remains the same," he says, similar causes will lead to like results, and the symptoms manifested in one case, and reappearing in another in similar circumstances warrants the latter's inclusion in a category with the first. What is this, then, but the essence of the Hippocratic methodology—and the genesis of a scientific search for categories of which Aristotle two centuries later became the great exponent?

The harmony of interest between history and medicine thus illustrated in the 5th century B.C. cannot be said to have continued for very many centuries subsequently. While historians continued their efforts to explain the phenomenon of a state or a society in terms of its human elements, their grasp of the wholeness of their subject tended to decline, and when they were describing events with which they were not at first hand acquainted, they dropped the safeguard of critical skepticism Thucydides had so valued. Stylized myth, legend, and fact and fancy fused with one another, and in the Christian era became subject matter to illustrate the miraculous powers of Providence. At the same time, medicine became transfixed with the pattern of its own early excellence. Its methodology became formalized and empty of genuine empirical motivation, and lent itself to magic and blind gropings in alchemy; or, on the

other hand, it became the occupation of a slave-class in leech-craft and barbering.

This is not meant to be a survey of world history from the viewpoint of both professions. But, having shown evidence of a hypothetical common origin in the 5th century B.C., I have now shifted my ground to show that even as our skills were the gift of a time and frame of mind, so they have reflected comparable circumstances in the course of time's changes. It would not be too much to say that the physical expansion of the 5th century world and its preoccupation with inquiry itself, the very intellectual vigor and creativeness of the 5th century B.C., made possible both these disciplines. It would be equally true to say that under the influence of Christian other-worldliness, the narrowing compass of man's experience of *this* world, led to the decline of our respective professions, for history like medicine, cannot flourish in an age unaware or resentful of the processes of change.

This is most remarkably borne out if we come closer to our own period of time. The great intellectual awakening of the 17th and 18th centuries has variously been described as the Age of Enlightenment, the Age of Reason, and the beginning of our modern world. Its impact was so great upon both medicine and history that to many students all that matters in our fields as discipline, has occurred since the 17th century, and all that pre-dates the period is of only trivial and antiquarian concern. I would not for a single moment underestimate the pertinence of the 17th and 18th centuries to our development as a civilization. But for the scoffer who might be inclined to "pooh-pooh" even that period as irrelevant to today, I might say that there simply cannot be any more discontinuity in the phenomenon of a changing civilization than there can be in the development of a case of measles. There may be complications, unrecognized data, but history has in its criteria no more place for the miracle than does medicine, and the present without a past is, it seems to me, a kind of miracle.

So, after this aside in deference of the relevance of the past to the present, let me go back to the 17th and 18th centuries. These were the centuries of accelerated change: of revolutions in politics, economics, and in intellectual inquiry which we call science. The physical universe was explored with new eyes, and the same environment of hungry search for knowledge brought out a Newton and a Harvey, a Descartes, Locke, and Hume. But their importance lay not so much, after all, in the addition they made of new knowledge to the fields of physics, anatomy, mathematics, philosophy, and political science. Their great contribution was one in which many shared. It was a new approach to knowledge itself. Basically this approach can be reduced to a non-laboratory terminology: it means observing relevant data, arriving at a tentative conclusion, and being willing in the face of new evidence to review one's conclusions, and change them if necessary.

Now this method was very important to the profession of medicine and to history. It so revolutionized the approach to knowledge that, for one thing, our special interests were temporarily lost in large and universal concepts. In this view there could be no man, a scientist, discrete from a political thinker or a philosopher; there was no man of medicine, no historian, separate from the scientist. The word science itself best encompasses the universality of interest. In 1725, the word science was applied to any "branch of study concerned with a connected body of demonstrated truths or with observed facts systematically classified and more or less bound together by being brought under general laws, and which includes trustworthy methods for the discovery of new truth within its own domain." Science was the new answer to old problems which philosophy and religion had failed to answer. Science was knowledge *and* method, and its field of inquiry was man and nature.

So, it was reasoned, if it were possible to chart the paths of planets, mathematically to plot the place and time of a comet's appearance, and to discover in the rhythmic beat of the heart the dynamic source of the circulatory system, why was it not possible to plot the orderly unfolding of social institutions, to determine the pulse of society and graph its reactions to stimuli, and to cure it of its ills? Thus, under the impact of science, the historian became more concerned with the search for the general law which moved society than he was with society's characteristics. It was believed that history and philosophy, and the emerging political sciences, were, like biology, physics, chemistry and medicine, methodologies and sciences. Since science was all inclusive and the general laws which were presumed to hold in nature held equally for man, then the objective toward which scientific thought moved was the understanding of the processes by which general laws acted upon nature and man. Thus, as the historian was at one time a social scientist, a philosopher, and a natural scientist, the man of medicine was equally a philosopher, a social scientist, and a natural scientist. In other words, man and nature were one—and the scientist was the discoverer and interpreter of it. Let me illustrate this universality of interest with two brief biographical sketches.

Take, for example, Joseph Priestley, who lived from 1733 to 1804. He was the author of one of the first books on electricity, in which he explained the rings formed by an electrical discharge on a metallic surface, since known as Priestley rings; he described the properties of numerous oxides; he discovered oxygen which he called 'dephlogisticated air.' He lectured in anatomy and astronomy, was a tutor in belles-lettres, and a clergyman. He introduced practical instruction in the sciences, and advocated the teaching of modern history. Besides his work on electricity, he wrote four volumes on church history from the skeptic's viewpoint; four volumes of critical notes on the Scriptures, and an essay on the *First Principles of Government* which suggested the utilitarian approach to moral problems. He was a democrat in an aristo-

cratic world. He supported the American Revolution and made himself so unpopular for that cause that he fled to the American colonies to live; and here he supported French radicalism and the French Revolution, even when these became unpopular ideas in the New World. He was, in truth, an example of a man of universal interest in an age of an inquiring and universal mind.

Take also the case of Benjamin Rush, often regarded as the fountain head of medical training in the United States. He was the author of five volumes of *Medical Inquiries and Observations*, and of one of the earliest collections of data on mental diseases. He was also a political leader and a revolutionist, a surgeon in the American Revolutionary Army, a member of the Continental Congress, and a signer of the Declaration of Independence. He established the first free dispensary in the United States, was vitally interested in education as essential to democratic process, and one may say of him generally, that while not as theoretical as Priestley, he reflected an amazing versatility of interests and attitudes. Both these men were men of their times, and their times were great with change.

However, it is evident from these examples that science had taken so great a world for its exploration that in it, neither medicine nor history as special disciplines could develop those particular attributes which today distinguish them. This could not occur until specialization took place. And specialization was the contribution of the 19th century to our fields. Just as history and medicine have had a common origin, a common reaction to the intellectual drives of the changing ages of human experience, they have had also, within the last 100 years a common character of specialization.

The extension of the known world, the tremendous additions to the existing bodies of knowledge, and a passionate search to increase that knowledge, devised the technique of the scientific method. In turn, this method pushed back farther the limits of knowledge, and the result was extremely significant. This cosmopolitan, universal minded scientist I have been talking about could not master all the data that was being discovered, so he began to narrow or to specialize in fields of inquiry. The historian as a specialist emerged, abandoning the fields of natural science but retaining its applicable methodology. He began the study of the minutiae of human activity. By the beginning of our own century, he was primarily occupied with the description of a documented situation. Furthermore, no longer concerned with the total picture of human society, with mankind, he narrowed down to one era in one locality. It has been my misfortune to know historians who were erudite in the field of English history between 1640–1688, but outside of that field were practically illiterate. There are other specializations equally narrow: the political historian who deals with institutions in a vacuum, or the economic historian, one of the more recent specialists who divides his inquiries into history of transportation economics, or history of trade, and so on.

It is unnecessary for me to point out comparable instances in the scientific field. The area of scientific inquiry broke up into physics, chemistry, biology, medicine, and numerous derivatives of each of these. Each created a body of knowledge and refined its techniques in such a fashion that it became increasingly difficult for one specialist to communicate with another. In short, there occurred a fragmentation of science, of knowledge itself, and each fragment attempted a self-sufficient and independent life of its own.

The consequences of such fragmentation present a remarkable contrast between the 5th B.C., the 18th, and the 20th centuries. I have already shown how the 18th century created a concept of universality, not only of interests among thinkers, but also of the knowable world in which general laws might be discovered and used to interpret the changing times. The end objective of every effort of that age was Man and Man in Society. Man could understand the world, and the world was created for man.

The 19th century's fragmentation denied the possibility of general laws, and the objective of a large and total understanding of Man was replaced with one of accurately described minutiae, of things, and of the method by which things could be described. In other words, the means swallowed up the ends. It is not irrelevant to point out that in the process of fragmentation the 19th century lost faith in moral values and political principles, and created, along with a relativistic morality, and expedient politics, the concept of the self-sufficient nationalist state, the class-struggle, in short, of a fragmented humanity.

Maybe by now, what I am trying to do is becoming obvious. I am trying to show that, as exponents of our particular disciplines that seem to us at this time so very separate, we are, after all, not so very far apart. We have had a very important factor in common—our historical development. Our professions are not self-created; they have been formed, and their techniques invented, in a social structure. Even the attitudes which mark us in the performance of our duties, are those created by the society and the time in which we live. But because our professions, of the medical and historical, of the natural and social sciences, are by their very natures concerned with knowledge of Man, there seems to me a need of a greater awareness of our mutual relationship, and of our interdependence.

The doctor's efforts are directed toward the understanding of the *corpus hominum*; the historian's toward the understanding of the *corpus gentium*. We are both engaged in the study of man, the doctor of his body, the professor of his society. And both of us are today coming of necessity to a new consideration of the interplay of those studies. In this mid-twentieth century, we are now swinging away again from the specialized, fragmented view of man and of society. Does the physical body of man exist today in your understanding as distinct and separate from his mind and mental attitudes? Are an individual's

attitudes—his bodily processes—separated from his environment? Is the specific case determinable except by reference to a larger body of cases—to a generally applicable theory? If you answer affirmatively, you will be agreeing with the historian who today is faced with a revision of his views, who can no longer look at minutiae without the relation of them to a larger framework, who sees a continuous interplay of all the elements which have affected, and perhaps will continue to affect man in his social setting. In a sense, perhaps, we are coming back upon ourselves to pick up some of the ideas of the past we have formerly discarded as obsolete. When our two professions started out, they had in common a concept of natural causation: of the case history as including the sum total of factors which comprise human nature itself. In the 18th century they came together again under the heading of science, again with a common approach and a common end—the understanding of man and nature conceived as one.

The break-down in our relations has had a bad effect upon both of us. The man of science has forgotten his relation to society, and to the organic character of society. He has forgotten that he is not the product of a test-tube, existing in a vacuum. The historian, on the other hand, has overlooked the need of making comprehensible his understanding of society to the scientist who has so much contributed to the making of that society. Nor has the historian fully comprehended the scientific contribution so radically remaking our world. A growing body of historians believes we could benefit by greater understanding of one another's fields; we would like to have a new rapport between us.

Editorials

BEST BOOKS IN MEDICINE

A Guest Editorial

For decades now the small general libraries have been guided in their book selection by the *Standard Catalog for Public Libraries*. Why have not medical librarians recognized the immense convenience of such a tool? Or, if they have done so—as may be surmised—why has a similar selection of current medical publications not been compiled?

Perhaps the reason is cowardice: we do not like to commit ourselves to saying in black and white, "These books are good," and implying by omission of other titles that the latter are not. Why do we not have the courage of our convictions? To be sure, we may make errors of judgment, but the general librarians cannot be infallible either. By and large, our proposed selections will usually be fair, and a protest from a supposedly injured author or publisher may be taken in good part, accepted composedly if undeserved, or profited from if justified. It may be objected that the literature of medicine is more serious and vital than general literature and that mistakes made in evaluating it will prove more devastating. True, perhaps, but that objection cuts both ways: it is the more necessary for us to procure all the guidance possible in a matter of such moment!

That it is not only possible but feasible to provide a selection of outstanding publications in the scientific field has been effectively shown by the success of the National Research Council's *Scientific, Medical, and Technical Books Published in the United States of America, 1930–1944* and its supplement. The medical contribution to this, prepared by Eileen R. Cunningham, and also published separately (Bulletin, 1945, 33: 319–40) has proved of inestimable value as a yardstick for medical books of the war years, and adverse criticism from authors or publishers whose books were omitted has yet to be heard. The selected serious literature of Germany is frankly and usefully listed in *Das Deutsche Buch*; the French are not afraid to cite theirs in the *Bulletin critique du livre français*. Our fears of critical comment—if we have them—thus seem unwarranted.

Do we really believe the lists we now have are sufficient? There are, of course, the two lists for hospital libraries, one compiled by the American College of Surgeons,[1] the other by the American Medical Association.[2] These are very

[1] American College of Surgeons. The hospital medical library. Bull. Amer. Coll. Surg. 32: 297–325, Sept. 1947.

[2] American Medical Association. Council on Medical Education and Hospitals. Hospital medical library suggestions; rev. to January, 1951. Chicago, 1951. 18 p.

restricted in scope, however, and do not attempt to cover all the literature. The longer list prepared by the Medical Library Association's Committee on Criteria for Medical School Libraries[3] as a section of their questionnaire, while more extensive, is still far from comprehensive. None of these compilations is brought out annually with the specific intention of seeking out those publications of the current year that are deemed worthy of consideration by a library, or by an individual, whose funds are not limitless. It is hard to believe that such a yearly list, thoughtfully and painstakingly prepared, subject to the frailties of human judgment though it will certainly be, will not be a welcome boon to each one of us and to many a member of the medical profession. Why don't we try it?

JANET DOE

THE MEDICAL LIBRARIAN'S OWN IRON CURTAIN

Anyone who has had occasion to try to hire a medical librarian within the past few years must have been struck by the sparsity of candidates with a knowledge of foreign languages. Most young librarians have studied one language in high school or college, although increasingly this language seems to be Spanish; with a little scrounging around and subversion of the conscience, the librarian can usually find he also studied another foreign language for a short period—say Anglo-Saxon—or took a short course in "comparative linguistics," which gave him a smattering of knowledge of many languages and little concrete about any one of them. Nor have these librarians fulfilled the promises made in the '20's and '30's that dropping the college entrance requirements for Latin and a modern foreign language would leave more time for a study of the natural sciences; for today's crop of medical librarians appears to be as innocent of any knowledge of anatomy, physiology, chemistry, and mathematics as were their predecessors. English literature, history, and social studies are still the subjects most frequently offered.

This situation is, of course, not confined to librarians alone. Physicians, dentists, nurses, and pharmacists are becoming equally tribal in outlook, and the plea, "Give it to me in English only" is heard more and more in the land. Even our medical indexes—the *Quarterly Cumulative Index Medicus*, and to a lesser extent, the *Current List of Medical Literature*—have emphasized the English contributions out of all true proportion.

Such an attitude does a grave disservice to medical science. Today, we laugh at the bumbling 19th century British view that anyone who cannot understand English is *ipso facto* of low intelligence, or that if one speaks English loud enough, anybody can understand; yet, we hear the equally absurd state-

[3] Medical Library Association. Committee on Criteria for Medical School Libraries. Survey of the libraries in the medical schools of the United States and Canada. Appendix I, "A List of monographs and textbooks issued since 1940." Presented at the 51st Annual Meeting of the Medical Library Association, Lake Placid, N. Y., June 24–27, 1952.

ment that all the best medical works are in English anyway, so why bother with the foreign literature. It is *not* true, either for past work or for the present, and we have only to look at the results of such nationalistic views in the decline under the Nazis of the once-outstanding German medicine, to be warned. It was not without wisdom, either, that a survey of the Medical Library Association in 1948/49 showed the members felt a knowledge of foreign languages was a prime essential for medical librarianship.

Medical librarians can and should work to reverse this trend. First, they themselves must study more—more Russian, more French, more German, more Italian, more, even of Latin, now that several Russian-satellite journals are published in that language. Second, they must scan the foreign literature more thoroughly than they do now, in indexes and abstract journals, if necessary because the originals are not at hand. And finally, they must call it to the attention of their library users when it is pertinent, until an awareness of its value is borne in upon them and subscriptions for more foreign journals are authorized.

The world of the mind is not changed at political or literary barriers; let us not "to the marriage of true minds admit impediments;" science is not science when it is dominated by chauvinism; and the librarian without a knowledge of foreign languages is only half educated.

Association News

COMMITTEE MEMBERS

(Supplements List in October Issue)

Committee on Resources

ALDERSON FRY, *Chairman*
SCOTT ADAMS
THOMAS P. FLEMING
CLARA S. MANSON
ELISABETH D. RUNGE

Exchange Committee

MRS. HENRIETTA T. PERKINS, *Chairman*
WESLEY DRAPER
ELEANOR JOHNSON
MILDRED V. NAYLOR
HELEN WHEELER

SALT LAKE CITY PREPARING FOR ASSOCIATION MEETING JUNE 16–19

"The Crossroads of the West," as it is called on the broadcast of the choir from the Mormon Tabernacle, welcomes the 1953 meeting of the Medical Library Association. At the foot of the Wasatch Mountains with the Great Salt Lake across the valley to the West, Salt Lake City offers a beautiful and interesting location for meetings, and a convenient starting point for vacation trips of all sorts. During the meeting, bus trips may be arranged to the open pit copper mine (through the narrowest town and street negotiable by car), to Salt Lake, with time for a quick dip (you can't swim and you can't keep from floating), and into the mountain canyons, perhaps with a ride on a ski lift. Time will be allowed for hearing the pipe organ recital in the Tabernacle and for listening to the story of the Mormon pioneers and seeing the accomplishments of the members of the more accurately termed Church of Christ of Latter Day Saints. A visit to one of the largest genealogical libraries in the United States can be arranged for those who are interested.

Most of the meetings and meals will be in the headquarters hotel, the Newhouse, but outside diversion will be provided, including, of course, a tour of the Medical Libraries of the University of Utah and the VA Hospitals. The air is dry; the sun is bright; but the temperature cannot be predicted. The safest wardrobe to bring will contain light clothing for hot days, a light suit for cool

days, and a fairly heavy topcoat for evenings and in the mountains. Good walking shoes are a comfort for tramping in the mountains, and for pacing the sidewalks between points of interest. Before or after the meeting it will be easy to arrange trips by railroad or bus or car to Glacier Park, Yellowstone Park, and the Teton Country on the North, Yosemite Park, Reno, and Lake Tahoe on the West, Bryce Canyon, Zion National Park, and the Grand Canyon on the South —just to mention a few attractions. The Northwestern-Union Pacific-Southern Pacific, and the Burlington-Rio Grande-Western Pacific lines reach Salt Lake City with beautiful trains, and local agents can make arrangements for side trips. United Airlines and Western Airlines have direct service from East and West.

A preliminary program of the meeting will appear in the April issue of the BULLETIN.

THE MEDICAL LIBRARY ASSOCIATION WELCOMES FELLOWS FROM OVERSEAS

Fellows from the Orient and South America arrive on the program for foreign librarians, sponsored by the Association's Committee on International Cooperation.

Mr. Yoshinari Tsuda comes from Tokyo, Japan. A graduate of the Japan Library School of the University of Keio, he is at present a member of the staff of the Medical Library of the Keio University Medical School in Tokyo. After a brief visit on the West Coast, Mr. Tsuda will matriculate as a special student at the University of Illinois Library School. Mr. Tsuda was awarded a grant for travel to the United States by the College Women's Club of Tokyo.

Miss Indu Vinayak Nawathe is from India and is Librarian of the B. J. Medical College, which is affiliated with the University of Poona. After a short stay in New York, Miss Nawathe will go to Nashville, Tennessee, where a combination program of special courses at the Peabody School of Library Science and study of technical processes at the Vanderbilt University School of Medicine Library has been arranged. Miss Nawathe traveled to this country on a Fulbright Grant.

Mr. Rodolfo Alfredo Tannchen of Córdoba, Argentina, is our third fellow. He is Librarian of the Clinca Pediatrica de la Facultad de Ciencias Medicas, Universidad Nacional de Córdoba. Mr. Tannchen will enter the Columbia University School of Library Service where he will take the complete library course through August, 1953. Mr. Tannchen's travel expenses to this country were paid by the Williams Foundation.

After our fellows have completed their studies, they will visit medical libraries to observe methods and library techniques used in the United States before returning to their homes.

News Items

THE FIRST INTERNATIONAL CONGRESS ON MEDICAL LIBRARIANSHIP

Arrangements are now well advanced for the First International Congress on Medical Librarianship which is to be held in London in July 1953, under the presidency of Sir Cecil Wakeley, Bart., President of the Royal College of Surgeons of England. The congress is receiving widespread support on the highest level and enrollments have already come in from more than twenty countries. The provisional program, now being distributed, contains the first list of Honorary Vice Presidents representing the chief medical libraries of the world.

The congress is being organized as a series of symposia for the discussion of such important themes as the education and training of medical librarians, the organization of new medical libraries, and international cooperation. In addition to the formal sessions, a full program of visits to medical libraries and institutions has been arranged and the numerous social events include receptions given by the chief medical bodies in London. A cordial invitation is extended to all medical librarians, bibliographers, and other interested persons to attend. Accommodation is provided in the University hostel at a very reasonable cost.

The program, which contains forms for enrollment and for the submission of papers, together with any other information required, may be obtained on request from The Honorary Secretaries, First International Congress on Medical Librarianship, London School of Hygiene, Keppel Street, London, W.C.1.

DOCTORAL DEGREE IN LIBRARY SERVICE AT COLUMBIA UNIVERSITY

Columbia University became the fourth school in the nation offering doctoral study in library service starting this fall, it was announced by Dr. Carl M. White, Dean of the University's School of Library Service. The new degree, the Doctor of Library Science, is approved by the Trustees of Columbia and the New York State Board of Regents, and as Dean White said "embodies the University's recognition that the work of a librarian has become a scholarly pursuit." The doctorate requires professional studies, completion of graduate courses, and a comprehensive dissertation.

NEW LIBRARY BUILDING FOR THE TEXAS MEDICAL ASSOCIATION

On September 21, an open house was held in Austin, Texas, on the occasion of the dedication of the Memorial Library Building of the Texas Medical Association. The Library is located at 1801 Lamar Boulevard.

CONFERENCE ON REHABILITATION OF THE PARAPLEGIC

On October 10, under the auspices of the Kessler Institute for Rehabilitation a conference on Rehabilitation of the Paraplegic was held in Pleasant Valley Way, West Orange, New Jersey.

In the morning the Fred H. Albee Annual Lecture on Rehabilitation was given by Dr. Ludwig Guttmann, Director of the Spinal Injuries Centre, Stoke-Mandeville, England. In the afternoon a panel discussion on "Residual Problems of Paraplegia" covered spasticity and its control, treatment of recurrent decubiti, renal prognosis in the paraplegic, and the future of the ambulant patient.

CLEVELAND HEALTH MUSEUM PUBLICATIONS

Juno, Symbol of All Women, a sixteen page illustrated pamphlet by Deac Martin, is issued as Healthguide No. 1 by the Cleveland Health Museum in a new series made possible by a grant from the Thomas H. White Charitable Trust Fund. "Juno, Talking Transparent Woman" is one of the Museum's foremost attractions and is an invaluable medium for family life education. Inside a clear plastic shell are placed as in the human female body bones and organs which light in sequence as "Juno" gives a fifteen minute explanation of how the body works. The Juno story is priced at twenty-five cents.

NEW BIBLIOGRAPHY AVAILABLE FROM ARMED FORCES MEDICAL LIBRARY

The Armed Forces Medical Library has recently issued its third large-scale bibliography: *Pathology and Physiology of Burns, 1942–1951*. Compiled and annotated by Mr. Karl A. Baer, it contains 611 references in 107 pages. It is arranged by large subject groups, generally on the basis of organ or system affected, and has an author index. Copies of this bibliography may be obtained free by requesting them from: Miss Estelle Brodman, Assistant Librarian for Reference Services, Armed Forces Medical Library, Washington 25, D.C.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES MEET

At the September 6–11 meeting of the American Institute of Biological Sciences at Ithaca, New York, a new NCI Camera Microscope and Electric Micromanipulator was demonstrated as joint exhibit with Carnegie Institute and Hastings Laboratories. Dr. W. E. Heston of NCI presented a paper on "The Bearing of Mouse Genetics on Our Understanding of Human Cancer."

REPORT FROM OUR BRITISH COLLEAGUES

The North-Western Polytechnic, Prince of Wales Road, London, N.W.5, repeated the course of lectures on Medical Librarianship during the fall semester. The fee of 30s. covered thirty-three lectures and visits to libraries. The lec-

turers included C. C. Barnard, W. J. Bishop, A. E. Fountain, G. J. Hipkins, W. R. Le Fanu, C. F. Marmoy, L. T. Morton, J. L. Thornton, F. A. Tubbs, and the Misses A. Lothian, M. M. Raymer, A. M. C. Thompson. The subjects covered included: history and present state of medical libraries, cataloguing and classification for medical libraries, medical periodicals and abstracting journals, history of medical literature, medical biography and individual bibliography, special forms of medical literature, principles of reference work and guides to current medical literature, medical nomenclature, medical library organization and administration, lives of medical bibliographers and librarians, official publications in the medical field, bibliographical citation, proof reading, medical school and hospital libraries, medical indexing, the literature of dentistry, of veterinary science, of pharmacy and of nursing.

Sir Cecil Wakeley, President of the First International Congress on Medical Librarianship, received a baronetcy in the Birthday Honours List.

SURVEY OF MENTAL HEALTH LITERATURE

Appearing in the September 15, 1952 issue of the *Library Journal* is "Peace of Mind," an Inquiry into the Demand for Books on Mental Health made by the Subcommittee on Book Appraisal of the ALA's Adult Education Board. Included among the Committee Members are Ilse Bry, Librarian of the New York Psychoanalytic Institute and Margaret M. Kinney, Chief Librarian of the Veterans Administration Hospital, The Bronx, New York City.

ACRL MONOGRAPHS

The Establishment of Staff Requirements in a Small Research Library by Saul Herner and M. K. Heatwole, librarians at Johns Hopkins University, is the third in a series of Monographs to be issued by the Association of College and Reference Libraries. It includes a case study in personnel administration which is of interest to special librarians and subject librarians in the large university or research library. Send 50¢ in stamps or coin to: David K. Maxfield, Business Manager, A.C.R.L. Monographs, c/o University of Illinois Library, Chicago Undergraduate Division, Chicago 11, Illinois.

The first two issues of this series are: *William Beer and the New Orleans Libraries, 1891–1927* by Joe W. Kraus, Librarian, Madison College, and *The Growth of Reference Service in the United States from 1876 to 1893* by Louis Kaplan, Associate Director, University of Wisconsin Library.

CASE OF U. S. VS HOXSEY

Reversing an earlier judgment by the U. S. District Court at Dallas, the U. S. Court of Appeals at New Orleans on July 31, granted an injunction against Harry M. Hoxsey and the Hoxsey Clinic of Dallas, prohibiting interstate shipment of the two Hoxsey medicines for cancer. According to the unani-

mous opinion "the overwhelming weight of the credible evidence requires a conclusion that the representation that the Hoxsey liquid medicines are efficacious in the cure of cancer is. . . false and misleading. The evidence as a whole does not support the finding of the trial Court that 'some it cures, and some it does not cure, and some it relieves somewhat.' " Under the law the defendants still have the right to petition for review by the U. S. Supreme Court.

CLASSIFICATION AND CODIFICATION OF ORGANIC CHEMICAL COMPOUNDS

The Commission de Codification, de Chiffrage et de Titrage des Combinaisons Organiques de l'Union Internationale de Chimie Pure et Appliquée proposed during the 15th Conference of the Union the circulation of the requirements on which a classification system should be based, asking those interested to submit any classification systems which might be useful. Nine classification systems were received and in August 1951, these were studied. At a meeting shortly afterwards, it was decided that the "Dyson classification" was the best available and that it should be provisionally accepted as an international classification system. The other classification systems will be studied in order to improve the Dyson classification where necessary.

NEW JOURNALS

Announcement has been made of a new bi-monthly periodical *Journal of Histochemistry and Cytological Chemistry* to be issued by the Histochemical Society beginning with the January 1953 number. The journal will be edited by Dr. R. D. Lillie of the National Institutes of Health, Bethesda, Maryland. It will be published by The Williams and Wilkins Company, Baltimore, Maryland, at a subscription price of $7.50.

Announcement in a previous issue of the BULLETIN that *The Medical and Dental Journal of the British Armed Forces* would replace the *Journal of the Royal Army Medical Corps* was premature. The only change is that the *Journal of the Royal Army Medical Corps* is now quarterly and includes only scientific matter.

The first issue of *Vital Notes on Medical Periodicals* prepared by the M.L.A. Periodicals and Serial Publications Committee appeared in October. Miss Lora Frances Davis of the Florida State Board of Health, P.O. Box 210, Jacksonville 1, Florida, is Chairman of the Committee.

Springer Verlag of Berlin has begun publication of a new bi-monthly journal of anesthesia *Der Anaesthesist.*

UNION LIST OF PERIODICALS IN PHARMACEUTICAL LIBRARIES

A new publication *Union List of Periodicals in Pharmaceutical Libraries* has been released by the Pharmaceutical Section of Special Libraries Association. It lists the magazine holdings of 25 pharmaceutical libraries in the U. S. and

Canada and gives the location of approximately 1500 journals. Periodicals in the fields of business and manufacturing, as well as many government documents are covered. Journals in fields closely related to pharmaceutical interests, e.g. veterinary medicine, public health, and food processing are also listed.

The new *Union List* was edited by Gertrude Bloomer, The Wm. S. Merrell Co. Assisting her on this project were Alberta L. Brown, The Upjohn Co., Mira Spinning, Bristol Laboratories, and Helen Loftus, Lilly Research Laboratories. Consisting of 195 pages, the *Union List* is in mimeograph form and is priced at $3.00 per copy. Orders may be sent to Miss Helen Loftus, Lilly Research Laboratories, Indianapolis 6, Indiana.

PERSONAL NOTES

Karl A. Baer took up his new duties on September 2, as Assistant Chief Librarian, Medical and General Reference Library, U. S. Veterans Administration in Washington, D.C. He was formerly Bibliographer of the Reference Division, Armed Forces Medical Library.

Mildred E. Blake became Assistant Librarian at Tulane University School of Medicine under Miss Mary Louise Marshall on October 1, 1952. She was formerly Medical Editor in the Surgeon General's office, U. S. Army, Washington, D.C. and had been previously with the Army Medical Library both in Washington and in its Cleveland History of Medicine Division. Miss Blake served as Associate Editor of the BULLETIN from 1950 to 1952.

La Iva B. Davis, R.N. (Rosary) has taken a leave of absence as Medical Librarian, Saint Catherine's Hospital, East Chicago, Indiana. She holds a certificate from the University of Illinois and one as a Medical Librarian from the M.L.A.

Lora-Frances Davis, Librarian, Florida State Board of Health, visited medical libraries in Chicago, Rochester, Minn., Minneapolis, Seattle, and Los Angeles in October in connection with a survey for the proposed University of Florida Medical School.

Pauline Duffield, formerly Librarian of the Library of the Medical and Chirurgical Faculty of the State of Maryland in Baltimore is now Librarian of the new Memorial Library of the Texas Medical Association in Austin.

Dr. Isabelle Entrikin formerly with the Index-Catalogue Division of the Armed Forces Medical Library is Director of Libraries at Santiago, Chile.

M. Ruth MacDonald, Assistant Librarian in charge of Cataloging, at the Armed Forces Medical Library, was awarded a grant under the International Educational Exchange Service of the State Department, to serve as a Consultant in Processing at the new American Memorial Library in Berlin. She was away from Washington for ninety days.

Chizuru Nakaji left her position at the Consumers Union Library and is now Assistant in charge of Serials at New York University Medical School Library.

Jesse H. Shera, formerly Associate Professor in the Graduate Library School,

University of Chicago, has been appointed Dean, School of Library Science, Western Reserve University.

E. Louise Williams, formerly Librarian of the State Board of Health, Jackson, Mississippi, has been appointed Head Cataloger of the Tulane University Medical School Library.

Inez Willoughby has taken up new duties at the Emory University Medical School Library. She was formerly on the library staff of the Tulane University Medical School.

New staff appointments made during the summer include *Mrs. Mary Cobb*, *Helen Lundstrom*, and *Evelyn Fuston* to the Biomedical Library at U.C.L.A. and *Fumiko Oiye* to the Los Angeles County General Hospital Library. *Robert Lewis* has returned to Southern California from active duty at Andrews Air Force Base in Washington, D.C. and is now Reference Librarian in the Biomedical Library at U.C.L.A.

Book Reviews and Journal Notes

KRANTZ, JOHN C., JR. AND CARR, C. JELLEFF. *The Pharmacologic Principles of Medical Practice.* 2d ed. Baltimore, Williams and Wilkins, 1951. xvii, 1116 p. $10.00.

The only textbook of pharmacology[1] which is comprehensive, accurate, and well enough integrated with the other basic medical sciences and with clinical medicine to be useful during the course in medical school pharmacology is ten years old—an eon considering the unbelievable progress during the period. It is, therefore, disappointing to find that the second edition of Krantz and Carr's text comes no closer to providing a substitute than did the first.

The major criticism, and the fault which made teaching with this book unusually frustrating, is its inaccuracy. Doses range from ineffective, for example, propylthiouracil 50 mgm. per day (p. 1084), to dangerous in the case of phenobarbital 0.1 gram four times each day (p. 1078). A few of the gross errors of the first edition have been corrected, but most, like the recommendation that streptomycin be given every 3–4 hours (p. 187), remain. "Muscle demyelinating diseases" have appeared in this edition and the amusing reference to (Dr. ?) R. D. Comp as coauthor of Nachmanson's paper in the *Comptes rendus* is still present as is the statement that diabetes was mentioned "in certain sanskrits of the fifth century." The 1941 publication of Katz *et al.* is still used to document the discussion of Papaverine even though the work was repudiated by its authors before the first edition of this book. Many protected names (e.g. Alglyn, Mechlorethamine) are dignified with an "N. N. R." and the official names are not mentioned. The examples are representative rather than selected and could have been taken from almost every page.

The physiology discussed is usually irrelevant to the discussion and always elementary. The attempt to achieve a clinical orientation obviously reflects no experience with the use of drugs in humans, and, in spite of the recent revision, the discussions do not always follow current clinical practice. For example, the treatment of asthma is considered without mention of isopropylarterenol. Some chapters, dealing with drugs of greatest interest to the conventional pharmacologist, are reasonably coherent, but others, especially the later parts of the book, show little organization. The book is well manufactured but the publisher must share responsibility for carelessness, such as the indignities to which familiar and historically important names are subjected (Schiedeberg, Vasquez, MacKenzie, McLeod).

The volume is, nevertheless, the most complete of the texts covering the new

[1] Goodman, Louis and Gilman, Alfred. The Pharmacological Basis of Therapeutics. New York, Macmillan, 1941. xiii, 1387 p.

drugs so that it has been adopted at many schools. The question of whether to acquire it for any collection will have to consider the local attitude. We still look forward to the promised revision of the standard work and to the appearance of other texts which adhere more closely to the needs of the instructor of medical students.

FREDERICK H. MEYERS, M.D.

U. S. Army Medical Library. *Catalog*, 1951. Supplement to the Library of Congress Author Catalog and the Library of Congress Subject Catalog. Washington, D. C., Govt. Print. Off., 1952. 866 p. $17.50.

The Army Medical Library *Catalog, 1951*, which is the fourth annual volume of a series, initiates the policy of bringing together under a single cover every catalog card made for titles in the field of the medical sciences during the year at the Army Medical Library (now Armed Forces Medical Library). At a cost of $17.50 it is difficult to see why any medical library would not want a subscription. The first half of the volume gives in alphabetic order every main and added entry, while the second half lists each subject entry. Under each heading all of the information which appears on the catalog card is given, and there is no more effort to get the complete catalog data than there would be in the normal use of a card catalog. Not only books and serials are entered, but theses, monographic supplements, pamphlets, medical reprints from non-medical publications, and other hard-to-locate material. Since the A.F.M.L. undoubtedly receives more medical publications than any other American library, it seems reasonable to suppose that it lists almost everything about which any other institution would want information.

The *Catalog*, a supplement to the L. C. Author Catalog and Subject Catalog, was first issued at the end of 1948, and has had two other similar titles. The preface to the current volume traces the brief history of the publication and points out that pre-1801 titles and Americana titles through 1820 are catalogued at the History of Medicine Division in Cleveland and so are not included.

The *Index-Catalogue* of the Surgeon General's Office has long been used and appreciated by librarians for identifying medical references of several sorts. Now it is to be discontinued, and though there is little resemblance between it and the *Catalog*, the latter, from a Librarian's viewpoint, will be far more helpful for monographic literature because it is up-to-date, gives catalog information including classification, card numbers, subjects, added entries; in fact, it gives everything one would want except the price and publisher's address! And if cumulative volumes are issued in the future, it will have the same advantage as the *Index-Catalogue* in covering a span of years in one volume or set of volumes. At the present time its usefulness as a current reference work is partly lost because most libraries already have searched, ordered, and catalogued many of the current titles before the *Catalog* is off the press. Monthly issues, of course, would be useful and libraries now subscribing to the comparatively

expensive sample set of A.F.M.L. cards might rather put the same money into volumes and thus avoid the cost of filing and housing the cards.

The 1951 edition is not heavy to use, being roughly twelve inches high, less than two inches thick and weighing five pounds. The paper is strong enough not to wrinkle and thick enough so the print doesn't show through from the verso. Each entry begins in large print so it can be identified easily, and the spacing is adequate for clarity. The inking, while uneven in spots, is not hard on the eyes, and the alphabetic arrangement eliminates the use of an index, a feature which its companion series the *Current List of Medical Literature* might well emulate in the indexing of serial articles.

The new *Catalog* will be found of the hi ghest importance for cataloguers, reference workers, order departments, and research workers. It is probably the most comprehensive current compilation of information regarding medical books, and as time passes and the volumes accumulate, those who might now regard it as something of a library handbook will discover that it is the most complete reference work available on medical monographs of the period.

CLARA S. MANSON

University of Tennessee. College of Medicine. Library. *Library orientation and instruction syllabus*. Compiled by the Library staff. Rev. ed. Memphis, Library, University of Tennessee, 1952. 110 p. (Mimeographed)

Many of us are dismayed at times to find a physician reader groping for needed information amid the most-used reference tools, and wonder *why*, somewhere in the long and complicated curriculum of his medical school, some simple instruction on how to use a library could not have been tucked in. Such instruction is of course available in many schools, and the present syllabus is a fine example of an accompanying guide which will serve the student long after the course is over. It is carefully compiled, complete, and up-to-date. It contains a glossary of library terms, a description of the physical arrangement of the Library, and a detailed explanation of its records. The principal indexes are thoroughly treated and the principal abstract and review journals are listed separately in subject arrangement.

The sections on literary research technique and thesis composition should be very helpful. The reviewer would prefer to see the necessary but slightly formidable "Library regulations" issued separately, and the glossary perhaps inserted at the end, so that, after reading the inspiring foreword, the student would come immediately upon the "Library Collection."

MARY E. GRINNELL

LIBRARY ASSOCIATION. MEDICAL SECTION. *Books and periodicals for medical libraries in hospitals*. London, 1952. 15 p. 2s.

The aim of this pamphlet, as expressed by the Committee, is "to provide a select list of books in the English language which are in steady demand, giving

alternative titles under each of the main divisions or specialties of medicine." To do so, suggestions from 2, as in Tropical medicine, to 14, as in Surgery, have been made, making a total of 179 titles. There are also listed 84 possible titles of recommended medical journals. It would seem to this reviewer that the Committee has admirably accomplished its purpose.

In studying this list and comparing with the pamphlet "The Hospital Medical Library" prepared by the Department of Literary Research of the American College of Surgeons in 1947, one is inclined to believe that additions or omissions might be made, according to the particular needs of each institution, the hospital budget, and the special preferences of the individual or group responsible for the decision. In general, however, it is to be kept in mind that a choice from this list is intended for small libraries which are to be encouraged to use the vast library resources of London, including University medical school libraries. With the increased emphasis on meeting the library needs of a larger group than the doctors only, one might wish to include some books on Hospitals and Hospital Administration. Perhaps a few titles in History of Medicine might also be added. One is also inclined to wonder how the library needs of the nursing personnel are met and if the nurses are privileged to use these libraries.

This reviewer is heartily in accord with the statement found in "Hints on the Formation of Medical Libraries in Hospitals," that hospital authorities should be encouraged to provide adequate facilities for all kinds of readers. In doing so it seems that great care must be taken in the following: 1. Considering budgetary provision for certain medical journals a "must," as it is largely to these that doctors will refer for medical questions of current interest. 2. Selecting titles of books which from demand, use, cost, etc., are indicated. 3. Provision, if at all possible, for trained medical librarianship in order that a) a sound foundation may be made in the beginning, b) continuance of this provision so that emphasis on good library service to its clients may be assured. With the acute shortage of trained library personnel one is inclined to wonder about the statement that "this shortage should only be temporary."

The members of this committee deserve great praise for making available to hospital authorities and the library profession this useful, informative pamphlet. There is consistent effort to correlate library needs of the medical profession with budgetary possibilities in small hospitals. It will serve as a quick and satisfactory reference to those hospitals and to librarians seeking help in organizing and building up a hospital medical library.

MARION H. WELLS

The British Medical Book List. Medical Department, The British Council. Vol. 1, September 1950–December 1951. $.75 a year.

The *British Medical Book List* (BMBL) is a continuation of the *List of New British Medical Publications*. Volume 1 contains numbers 1 to 16, September

1950 to December 1951; volume 2 will have 12 numbers, January to December 1952. Back numbers are not available.

Perhaps the best way to describe the *BMBL* is to quote from the introduction, "The aim of the *BMBL* is to provide a comprehensive monthly guide to current medical literature, to recent books and pamphlets, new journals, official publications and brochures and reports from voluntary organizations. The *BMBL*. . . does not pretend to cover all the work published during the month of issue; publications are, however, included after they have been examined by the Councils' Medical Librarian. Inclusion in the *LIST* does not imply recommendation nor does exclusion imply criticism of any particular work, but rather that it is not considered likely to meet the requirements of overseas readers."

The last sentence is rather enigmatic in that the *BMBL* includes many titles published in the overseas Empire or first published in the United States. "The entries are arranged alphabetically under the name of the author and consist of: (a) Author, title, edition, publisher, date, and price. (b) In certain cases a descriptive mark . . ."

An evaluation was attempted by comparing the *BMBL* with *Current Literature* (*CL*), and the *British National Bibliography* (*BNB*).

As was expected, the three lists do not entirely duplicate each other. For the first six months of 1951, the *BNB* Medical section contained 306 entries or 51 a month. This includes some duplication since the *BNB* may list a title under more than one heading. The CL Medical and Surgical section contained 308 entries for the same period. It will be demonstrated that several of the titles carried in the *BMBL* would appear in other sections of CL. In the first half of 1951, the *BMBL* had 308 entries.

The statement that ". . . publications are included after they have been examined . . ." might lead one to think that the listing in *BMBL* would have more time lag than in other bibliographies. This does not seem to be the case: of the 55 titles listed in *BMBL* of April 1951, one was found in the April Medical and Surgical section; 16 were found in the same section for May; one was found in the same section for June; one was found in the same section for July; two were found in the Sociology section for May; one was found in the Chemistry and Physics section for May; one was found in the Educational section for May.

Working at the comparison from another angle, it was found that the entries in the January 1951 Medical and Surgical section were distributed as follows in the *BMBL*:

Number of titles in CL	*Issues of BMBL*
1	Sept. 1950
0	Oct. 1950
2	Nov. 1950
11	Dec. 1950

Number of titles in CL	*Issues of BMBL*
10	Jan. 1951
1	Feb. 1951
1	March 1951
0	April 1951
0	May 1951
0	June 1951
1	July 1951
0	Aug. 1951
30	Not found

Yet in six months three bibliographies have 306, 308, and 308 entries.

What does this indicate? Probably that the three bibliographies use different rules of entry, and that for $.75 a year the *British Medical Book List* is certainly a valuable, current, and relatively complete bibliography of the output of British medical literature. The fact that it is in one alphabetical list makes it easy to use.

JOSEPH RUNEY

NEUBURGER, M. *Zur Geschichte der Hygiene und prophylaktischen Medizin des Greisenlaters.* [Contribution to the history of hygiene and prophylactic medicine of old age.] Wiener klinische Wochenschrift. *63:* 797–801, 1951.

It is gratifying to see that the Nestor of medical history is still at work, busy as ever. His pen has lost nothing of its vigour and conciseness. In a few pages the medical aspects of old age are presented as they appeared to the ancient Israelites, to Hippocrates and Plutarch, to the Romans, and to the Middle Ages. Books systematically discussing the diseases of old age made their appearance relatively late, in the first half of the 18th century (Floyer, Cheynes, Cohausen). From then on, the development of geriatrics gained momentum as the average life span gradually increased, and book production kept pace with it. For selective annotated bibliography of these more recent works, one will find Dr. Neuburger's paper a useful supplement to the first chapter of Thewlis' *The Care of the Aged* (5th ed. St. Louis, 1946).

KARL A. BAER

Bibliography of Articles on the History of American Medicine; compiled from "Writings on American History," 1902–1937; by JUDSON B. GILBERT, M.D. New York, New York Academy of Medicine, 1951. 44 p. $1.25.

Latest of the publications in the History of Medicine Series issued under the auspices of the Library of the New York Academy of Medicine is this bibliography of articles and books, 1902–37, which are of interest to students of medical history, but which have been noted in no medical indexes and thus may have been overlooked by those whom they would interest most. Titles are arranged in groups under broad subjects, as Biography, Local History and Societies, Hospitals, and Medical Education. References have been gleaned

from early writings on American history and the Griffin series of the American Historical Association comprising some 42 volumes. Every effort has been made to eliminate from this list all titles which have been included in the four series of the *Index-Catalogue*, the *Index Medicus*, and the *Quarterly Cumulative Index Medicus*. The bibliography is, therefore, valuable as a supplement to these major tools in the field of its subject matter.

Dr. Judson Bennett Gilbert was for many years interested in research in medical history and in the cultural aspects of medicine. He has compiled extensive bibliographies as yet unpublished, on other subjects in the course of his studies. It is to be hoped that these also may be made available through the medium of print. The present list appears posthumously.

MARY LOUISE MARSHALL

Blakiston's Illustrated Pocket Medical Dictionary. Edited by NORMAND L. HOERR AND ARTHUR OSOL. 1st ed. New York, Blakiston, c1952. 1021 p. illus. $3.75.

Assisting in the editing of this useful pocket medical dictionary have been S. W. Chase, C. C. Francis, Marion G. Howell, and Laura E. Moore. The illustrated plates refer chiefly to anatomy and surgery. There are 33,000 entries with an appendix of a number of helpful reference tables. These refer to anatomical terms, diet tables, chemical tables, medical signs and symbols, Latin and Greek terms, and weights and measures, together with standard physiological and biochemical values.

With well arranged type, this pocket dictionary is easy to use, and is comprehensive and up-to-date. It will be helpful not only for physicians, but also for nurses, dentists, pharmacists, laboratory workers, court reporters, and many others who may have occasion to use current medical terminology. It has the great advantage of being compactly and conveniently arranged. It is likely that it will go into many editions. A helpful addition would be a list of commonly used drugs with dosages and indications.

CHAUNCEY D. LEAKE, M.D.

KENK, ROMAN AND NALL, MABEL LEXTON. *Physiology of the Circulation of the Brain: An Annotated Bibliography, 1938–1948*. Physiol. Rev., Supp. no. 1, v. 32, July, 1952. 437 p. $4.50.

The approximately 2000 references, selected from a total of some 5000 articles examined by the compilers, are arranged in alphabetical order by author in 382 pages, while a 54 page Subject Index refers back to the main portion of the work by author and date of publication. Each reference is annotated to give "a brief outline of the contents of the publication or state the relation of the paper to other publications of similar or identical contents." Critical interpretation is left to the specialist. Titles are given in the original language,

with a translation in parentheses. Russian titles are transliterated. Journal abbreviations do not follow existing lists, but are made up to be readily intelligible to workers in the field without recourse to library tools. All items were seen by the compilers except those marked as unavailable.

Designed to continue the bibliography of cerebral circulation from the date of publication of *Circulation of the Brain and Spinal Cord* (Association for Research in Nervous and Mental Disease. Research Publications, v. 18, 1939), this bibliography took approximately three man years to compile and cost in the neighborhood of $20,000. The Library of Congress undertook the work under a contract with the Biological Sciences Division of the Office of Naval Research. The Armed Forces Medical Library, the libraries of the Department of Agriculture, the Smithsonian Institution, the National Institutes of Health, New York Academy of Medicine, College of Physicians of Philadelphia, John Crerar Library, and the Library of the University of Colorado aided in the compilation.

ESTELLE BRODMAN

The Physiologic Effects of Wounds, by The Board for the Study of the Severely Wounded, North African-Mediterranean Theater of Operations. The Medical Department, United States Army: Surgery in World War II. Washington, D. C., Government Printing Office, 1952. 368 p. $3.50.

Only the mass trauma provided by war can supply sufficient material for satisfactory studies on wounds and wound results; happily, no private or even industrial practice can approximate in number of cases those reaching the clinician and surgeon in the battle area.

Shortly after the North African landing, Lt. Gen. Jacob B. Devers, on the recommendation of his Chief Surgeon, appointed a Medical Board for the Study of the Treatment of the Severely Wounded (this title later shortened to The Board for the Study of the Severely Wounded), with Lt. Col. Tracy B. Mallory as chairman, and Lt. Col. Henry K. Beecher, Major Charles H. Burnett, Col. Fiorindo A. Simeone, Lt. Col. Eugene R. Sullivan, all Medical Corps, A.U.S., and Captains Seymour L. Shapiro and Louis D. Smith, Sanitary Corps, A.U.S., as members.

It was considered that not only a correlated study made in the field, of clinical, physiologic, biochemic, and pathologic aspects was advisable, but also that short of such definitive action, documentation of the observations might never be achieved with sufficient detail. The present volume is the result. It is not a wound study; it is concerned primarily with the internal state of the severely wounded man, together with the nature and type of the wound and of the evacuation time and hazards as affecting factors. Studies include determination of blood loss, of plasma and hemoglobin levels, analysis of other biochemic changes encountered, kidney and liver function, and measures for resuscitation

from shock, with analysis of internal organ damage due to shock mechanism and balancing of reparative procedures.

The confused theories of traumatic shock elaborated from the experiences of the preceding war were discarded. Shock became part of and subsidiary to the entire trauma picture. Care of the wound itself was considered the most potent factor of survival, not only in saving life but in preparation for necessary surgery. This was instituted immediately if needed; shock was not regarded as "irreversible" or operative procedure as necessarily futile. Plasma was used as a palliative measure, in minimal amounts, carrying the patient to vital surgery. It is interesting to quote the following from the well written Introduction by Col. Edward D. Churchill, MC, A.U.S., Surgical Consultant of the Theater:

> A highly significant product of the development of the art of resuscitation was merging of consideration of shock with consideration of the implications of the wound. Historically, wound surgery has been linked with the prevention and treatment of infection, and, as a matter of fact, in the less seriously wounded this function of surgery still is predominant. In World War II this concept was modified, as it was not applicable to the many desperately wounded casualties that came under surgical management. It was no longer valid to hold that a seriously wounded man could be resuscitated solely by methods directed toward restoring blood volume, and that when this was accomplished wound surgery could be undertaken, depending only on the time necessary for prevention of infection. Wound surgery under these circumstances assumed the new position of being in itself the climax of resuscitation. General recognition of the principle that procedures commonly grouped as "resuscitative" are but integral steps in the management of a situation that must be viewed as a whole, and that *wound surgery may in itself be the most potent act of resuscitation*, stands as a basic achievement in World War II.

The Board's work is valuable not only on account of conclusions reached, but as much so because the proceedings have become part of professional and military record. In comparison we have little from World War I that gave positive evidence of the value of blood transfusions; statements were made on the basis of general impressions rather than on controlled observations and convincing proof.

No startling disclosures are resultant from the extensive and well-planned laboratory coverage. Severe hemoconcentration was infrequent. Seventy percent of blood could be lost and recovery yet ensue, but there was a quantitative relationship between loss of blood volume or hemoglobin and the degree of shock; the major cause of shock was considered to be hemorrhage. The effect of shock on the kidney became more apparent as a component of the injury

syndrome. There were progressive and significant rises in nonprotein nitrogen, creatinine, phosphorus and magnesium, and in the van den Bergh index. Histologic findings in fatal cases showed apparently a selective functional impairment of the lower nephron; the extent and relationship of anuria and oliguria to fatal outcome are analysed.

The eminent members of the Board for the Study of the Severely Wounded are to be thanked and complimented for their thorough and conscientous work, carried out often under severe climatic and material handicaps; and the editorial staff of the Historical Division, Surgeon General's Office, for a smoothly edited and very readable volume. ROBERT C. RANSDELL, M.D.

ZANGWILL, O. L. *An Introduction to Modern Psychology.* N. Y., Philosophical Library, 1950. 227 p. illus. $3.75.

This book is deceptively small. Deceptive because it contains a great deal of information. In nine chapters the author gives not only the background leading to the modern development of psychology, but he attempts to show some of the directions it is taking. In some areas the book is somewhat uneven, as for instance, where Zangwill discusses the influence of environment on personality or the co-relation between intelligence and proneness to develop neuroses. As for example, for the first instance, he states: "In the unfolding of instinct, then, the vicissitudes of early environment may prove to have greater significance than is commonly supposed." As an example, for the second instance, he states: "The more intelligent an individual the more capably will he cope with his personal problems;" conversely, the duller an individual the more prone will he be to succumb to psychoneurotic illness!

As is not unusual, the author quotes more of the literature of his own country than of recent work done in the United States, some of which corroborate his point of view. I found most useful Zangwill's thesis of seeing psychology developing in the direction where there would be found a common denominator between psychology, brain physiology and neurology, respectively. He hopes that this would give additional insight into the mental structure and dynamics, a view which is held by some workers in the United States.

MARCEL HEIMAN, M.D.

GUTTMACHER, MANFRED S. *Sex Offenses, the Problem, Causes and Prevention.* New York, Norton, 1951. 159 p. $2.50.

Dr. Guttmacher has been psychiatric advisor to the courts of Baltimore, Maryland, for the past twenty years. He also served in 1948 as psychiatric advisor to the Committee of the United Nations Social Commission studying the causes and prevention of crime, and the treatment of offenders. In 1951, he delivered a series of three lectures at Stanford University as guest speaker for the Jacob Gimbel Lectureship in Sex Psychology. It is these three lectures which have been expanded to form this very provocative book.

It is reassuring to find, newspaper and magazine stories to the contrary, that sex offenses are not increasing. What seems to be increasing is the trend to hysterical fear on the part of the public regarding sex crimes. Like Dr. Karpman at St. Elizabeths Hospital in Washington, Dr. Guttmacher stresses the need for less hysteria and for a more scientific and objective study of the sex offender. It is not through newspaper and magazine accounts that the solution to prevention of the sex crime and treatment of the sex criminal are found. Such media serve only to stir up anxiety and do little to solve the problem.

Dr. Guttmacher has statistics which are reassuring and which cover not only the national scene but also the Baltimore picture. With such checks on his sample population he is able to combine statistics and the individual case approach to describe the problem with much objectivity. He is, then, able to prove that the Negro sex offense rate is lower than their crime rate, that there is a relationship between head injury and tendency to sex crimes, that sex criminals in general are more retarded intellectually than other types of criminals. This is especially true of those who molest young children. It is surprising to find that with the exception of rape, sex offenses are more common among men over thirty years of age. Rape is a disease of the younger male.

Dr. Guttmacher is, however, at pains to show that generalizations must not be made about the sex criminal, even with the aid of statistics. The book is filled with case histories which show that similar sex crimes often present marked contrasts. He stresses an individual approach to punishment and treatment. Psychiatric evaluation as well as legal punishment is emphasized. The feebleminded and the psychotic require management different from the young ablebodied and aggressive psychopath who commits rape as part of his need to act out hostile feelings about society.

What should be done about the sex criminal? The many solutions which have been proposed, from castration to psychiatric treatment, are discussed by Dr. Guttmacher dispassionately and logically. His conclusions are that special psychiatric clinics attached to the courts are needed. The person arrested for theft who may be a potential sex criminal may be detected; the sex criminal himself may be examined and if possible treated. The courts can be advised as to whether psychiatric treatment or permanent incarceration is advisable. This medico-legal relationship exists in Baltimore. Dr. Guttmacher has proved that with psychiatry advising but not controlling the law, the psychiatrist and the judge have both helped to make the problem of the sex offender one which can be treated realistically for the best interests of society.

What would solve the sex problems of society, what would solve many other problems, would be for parents to be better parents to their children. Dr. Guttmacher states that "There is not the slightest doubt in my mind that the chief key to the problem lies in the psychological attitudes within the home." If parents loved their children and loved each other, we would not have sex offenses and we would not have the sexual criminal.

SOL CHAREN

Obituaries

Mrs. Josephine Morton

Mrs. Josephine Golden Morton, 63, chief medical librarian at the Howard University School of Medicine for almost 25 years, died October 19th after a six-months illness.

Appointed as librarian in 1927, Mrs. Morton developed the library to its present status of well over 60,000 volumes. Many of her ideas were incorporated in the school's new medical library in the Dentistry building now being constructed on the campus.

A native of Washington, Mrs. Morton graduated from Miner Teachers College. After teaching for several years, she studied Library Science at the University of Chicago and Columbia University. She was awarded one of the first medical librarian certificates by the Medical Library Association, and at the time of her death was serving on the Criteria for Medical School Libraries Committee. She was also a member of the Special Libraries Association. She is survived by her husband, Dr. Fred D. Morton.

A friend of students, Mrs. Morton aided a countless number to remain in medical school with financial gifts and clothing. At Christmas time, she was known for her kindness toward students who were unable to return home for the holidays.

Dr. G. M. Findlay, 1893–1952

Word has just reached us of the death of Dr. G. M. Findlay, Editor of *Abstracts of World Medicine*, in the spring of 1952. Dr. Findlay had been active in several of the UNESCO conferences on the bibliographic control of medical literature and had served as Chairman of the Commission on Techniques for Abstracting of the International Federation of Documentation.

William J. M. A. Maloney, M.D.

On September 3, 1952, Dr. William J. M. A. Maloney, long a New York neurologist, died in his native Edinburgh. After distinguishing himself in the first World War, Dr. Maloney became an American citizen. Since his retirement from practice he devoted himself to the history of medicine. He was the author of several articles and was at work on a book at the time of his death. His summer trips to the British Isles were spent chiefly in tracking down bits of obscure information unavailable in this country. A number of British medical librarians will certainly join us in voicing our appreciation of his warm friend-

ship. His interest in George Armstrong, eighteenth century physician, led to his presentation of a plaque in honor of Armstrong's contributions to pediatrics to Armstrong's native village of Newcastleton, Scotland, and the establishment there of a memorial collection of Armstrong's publications. Dr. Maloney's generosity in time, effort, and money as well as his interested regard for members of the staffs of libraries will not soon be forgotten.

G. L. ANNAN